The Hunterian Lectures
ON
INFANTILE SYPHILIS.

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LECTURE III.[1]

MR. PRESIDENT AND GENTLEMEN,—The lesions of the osseous system in inherited syphilis are of great clinical interest. The due appreciation of their frequency and importance may fairly be claimed for modern observers. As late, indeed, as 1858 Diday writes that "the annals of science offer at most five or six well authenticated instances of them." These words of Diday and the reticence on the subject by the authorities of his day would seem inexplicable in the face of our present experience did it not appear by their writings that almost the sole affection of the osseous system Diday's contemporaries regarded as syphilitic was the presence of suppurating nodes on the long bones. Now, nodes on the long bones, whether leading to suppuration or not, are rarities in infants with inherited syphilis, and the non-discovery of them no doubt led to the erroneous impressions of Diday and others. Mr. Hutchinson states that he met with a few instances of nodes on the long bones in infants early in his career and, I gather, does not regard them as so very uncommon. Other writers, too, describe them as not infrequent, but that, being evanescent, they are often overlooked. This is as it may be, but careful and prolonged search has not enabled me to come across an instance of them in a child younger than eighteen months. In older children they are occasionally found in association with Hutchinsonian teeth and interstitial keratitis. They usually occupy the same situations as the nodes of the adult acquired form, but have seemed to me less tractable to the influence of iodide than these last.

If nodes are rare on the shafts of the long bones they are far from being so on the bones of the skull, for the researches of Parrot have clearly established the periosteal origin of the well-known cranial bosses occurring in inherited syphilis. These may appear in many places on the skull, but are certainly more frequent on the frontal and parietal bones, close to the margins of the anterior fontanelle. With regard to the contention as to what really constitutes a syphilitic type of skull in infants, I would state my conviction that the natiform skull of Parrot, with the four bosses closely surrounding the anterior fontanelle, is undoubtedly syphilitic, and in this I am happy in being confirmed by Dr. Eustace Smith. The subsequent changes in the skull brought about by rickets being superadded to syphilis have led, I believe, to a confusion amongst observers. But the cranial bosses in rickets are confined to accentuations of the frontal and parietal eminences. Mr. Macnamara has, moreover, in his interesting work on the bones and joints, shown that in extensive syphilitic disease of the bones of the skull the frontal and parietal eminences are the only parts that escape. In early cases, then, we have the means of distinguishing the syphilitic from the rachitic type of skull. But rickets is so frequent a complication of inherited syphilis that after the age of six months we are apt to get a mixed type of skull, with corresponding difficulties as to the part played by the different factors in its causation. If I ventured to criticise the classical description by Mr. Hutchinson of the later stages of inherited syphilis, it would be that the type of skull he associated with this complaint is really due to rickets following upon it. The cranial bosses in syphilis do not often last beyond the first year of life and leave no traces of their former presence, and, moreover, do not affect the situations of the frontal and parietal eminences.

As with the type of skull, the connexion between inherited syphilis and rickets has been one of discussion. The explanation of the frequent association of the two complaints would seem to me a natural and simple one. Rickets is a disease of mal-nutrition which may own many causes for its production. Amongst these, possibly, no factor is more powerful in this way than syphilis, and thus the vast majority of syphilitic infants incur a greater or less degree of subsequent rickets. The contention of Parrot, that every case of rickets has a foundation in syphilis, is to me, as with most others, inexplicable and utterly untenable. In only one case have I seen suppuration ensue upon a node on the skull. Here a tender swelling over the frontal bone occurred in a syphilitic infant about six months old, with redness and infiltration of the overlying skin. The skin gave way in a short time, and the bone beneath rapidly necrosed away, opening up the cerebral membranes; mercury, iodide, and the cautery alike failed to arrest the progress and the child died from abscess of the adjacent brain. Dr. Barlow lately mentioned that he had seen two cases of a like formidable character, but I am not aware whether he has published them or not.

By far the most important and frequent osseous affection in inherited syphilis is the inflammatory one occurring in the epiphyses and in the junctions between them and the rest of the bones. First described by Wegner in 1870, his researches have been confirmed and extended by Taylor of New York, Dr. Barlow, Dr. Lees, and many others. According to Wegner, there is found in the bones of new-born syphilitic infants and young children a morbid process taking place at the point of junction of the cartilage of the epiphysis with the diaphysis. This consists of a proliferation of the cells of the cartilage along with a retardation of ossification in its already calcified structure. At the same time this proliferation of the cartilage cells interferes with the existing blood-vessels, and the formation of new ones takes place imperfectly or is altogether arrested. As a consequence of this interference with the bloodvessels the cartilage cells themselves suffer in their nutrition and undergo atrophy or fatty change. The result of this morbid process is seen on section as a narrow, somewhat jagged line of yellowish or orange colour running along the line of the epiphyseal cartilage. This appearance, according to Wegner, is due to necrotic tissue separating the diaphysis from the epiphysis, and a further suppurative complication may lead to a complete detachment of the latter from the shaft of the bone. Taylor of New York confirms this appearance, but he—and in this he is supported by Waldeyer and Köbner—regards the yellow zone not as a necrobiosis due to deficient vascularity, but as a gummatous process due to the enormous proliferation of new cells, which by compressing the vessels lead to the destruction of the intervening tissues and the consequent separation of the epiphysis from the diaphysis. Whether Wegner's or Taylor's is the correct interpretation of the epiphyseal change is of minor moment; both are agreed as to the frequency and importance of the result produced. Along with the other changes just described the ossification of the epiphyseal cartilage proceeds irregularly, and the cartilage cells, which in health are arranged in rows, are disarranged, or are completely disintegrated and replaced by groups of smaller cells.

Such, in brief, is a summary, mainly from Henoch, of the pathological disturbances occurring in the epiphyseal cartilages upon which most modern German writers lay especial stress. It is claimed that the morbid process always appears in several places simultaneously, particularly often at the lower end of the femur, in the bones of the legs and forearms, and in the ribs; sometimes in all the long bones together. It is not necessarily confined to the larger bones, however, for it is now known that syphilitic dactylitis in reality commences with disease of the epiphyseal ends of the phalanges. Wegner, who first described this epiphyseal disorder, says it is almost constant in the bodies of infants suffering from inherited syphilis. Kassowitz, who admits its extreme frequency, had nevertheless met with a few cases where it was absent. Waldeyer, Köbner, and Fränkel describe it as being present without exception in every case of inherited syphilis, and the first two state that even when there are no naked-eye changes in the epiphyses these may be recognised with certainty by the microscope. Birch Hirschfeld, too, writes as if the absence of epiphyseal disorder were the surest proof of the freedom of the infant from syphilis. Most of the modern German authorities, in fact, would seem to regard this affection of the epiphyses as pathognomonic and distinctive of inherited syphilis, and to regard its non-discovery as conclusive evidence of freedom from it. In the

[1] Lectures I. and II. were published in THE LANCET of April 11th and 18th, 1896, respectively.

English text-books much less attention is paid to it. This possibly arises, however, from the subject not having received the general notice that its importance deserves, owing to a non-appreciation of its prevalence.

Whether it be as frequently present as a pathological condition as some German writers allege or not, there is a consensus of opinion that this epiphysitis only calls for consideration as a clinical symptom in exceptional instances. In its milder forms it can sometimes be diagnosed by the pain elicited by pressure over the epiphyses of the long bones, more especially the lower ones of the humeri and bones of the orearms. But pain is no necessary accompaniment of syphilitic epiphysitis; and there may be considerable swelling of the epiphyses of several bones with no obvious sensory disturbance. This swelling of the epiphyses, with or without pain, as the lesion giving rise to it is a congenital one, may appear in infants of any age. When the enlargement of the epiphyses is of any considerable size, however, it usually occurs in infants of from three to six months old, but is rare after the latter age. Some writers give criteria by which syphilitic enlargements of the ends of the bones are to be distinguished from rachitic ones in the same situations, but I cannot think confusion between the two conditions can often occur. The younger age of the syphilitic patients, the want of symmetry in the distribution of the bony lesions, the greater prevalence of the lesions in the bones of the upper extremity, and even here very often a predominance in one side over the other, along with the presence of other signs of syphilis, ought to be sufficient to prevent errors of diagnosis. Still, in children over the age of six months syphilis and rickets may occur together, and here it may perhaps be an impossible matter to duly apportion to each disease its share in the causation of the epiphyseal swellings.

Suppuration as a result of epiphyseal disease of the long bones is rare in infants under a year old, and I have only known two or three examples of it. In older children suppuration over the ends of the long bones is, perhaps, commoner than in young infants, owing possibly to walking and other uses of the limbs proving prejudicial to a previous epiphysitis not entirely cleared up. A symmetrical suppurative epiphysitis in children between one and three years old is to me sufficient to warrant a strong suspicion of syphilis for its causation. In contradistinction to the case of the long bones, suppuration arising from epiphysitis of the phalanges, "syphilitic dactylitis," is not very rare. Like Mr. Hutchinson, I have only seen it in connexion with the bones of the fingers, never with those of the toes. Dr. Colcott Fox has, however, published a case where it occurred in the foot. On all these points regarding suppuration I speak with some diffidence, as such cases come more appropriately under the care of the surgeon than that of the physician. Like suppuration, separation of the epiphyses of the long bones is rare, and my experience of such cases is an extremely limited one. Dr. Barlow has lately called attention to the deformities of the limbs that may result from it owing to the awkward angles at which the epiphyses may rejoin the shafts.

By far the most interesting condition associated with epiphysitis is the anomalous one known as syphilitic "pseudo-paralysis," in which one or more of the limbs lie cold, wasted, and flail-like by the sides of the body. I have associated this "pseudo-paralysis" with epiphysitis because the generality of writers have ascribed the muscular wasting to disuse, owing to the pain ensuing on motion from the presence of epiphyseal swellings. Henoch has thrown doubts on this origin of the disorder, however, and with these I agree. It is quite possible to have marked wasting and complete immobility of the limbs in a syphilitic infant without any obvious epiphyseal swellings and with an entire absence of pain. In two cases of "pseudo-paralysis," moreover, having a perhaps exaggerated fear of epiphyseal separation, I had the affected arms confined in splints. Under the use of mercury the infants concerned recovered power and muscular tone, although their arms were rigidly fixed. I cannot, then, hold mere disuse accountable for the muscular wasting and paresis. As a possibility I would suggest a peripheral nerve origin for this "pseudo-paralysis" due to the epiphyseal disease, and its being, perhaps, akin to the nervous disorder Dr. Ord has shown may arise from primary joint trouble. Bednar, who would seem to have been exceptionally fortunate in meeting with "pseudo-paralysis," for he found it in nineteen out of sixty-eight cases of inherited syphilis, ascribed it to a syphilitic myositis. It is essentially a complication of the earlier stages of inherited syphilis, the limits of age during which I find records of its occurrence being one week and eight months. At the first-mentioned age it was noted in a case under Dr. George Ogilvie's care and at the latter in one under Henoch's care. It is possible, however, that more careful search would enable me to find it recorded at a later age than the one mentioned. My own cases, amounting to perhaps a dozen, all occurred in infants under the age of three months, most of them, indeed, in infants less than six weeks old. In several the paralysis was the earliest symptom of inherited syphilis and preceded the more unequivocal ones by an appreciable interval. In all my cases the arms alone were affected and in only three did the complaint attack both limbs; in these three, moreover, the one arm was affected before the other. In Bednar's nineteen cases the arms were affected sixteen times, the legs once, and all the limbs twice. All observers are agreed as to the special tendency for the arms to suffer and that these suffer first even in the cases where other limbs are subsequently affected. What other factors besides syphilis are necessary for its production and its pathology are still problems requiring solution.

Turning from the symptoms of the inherited to those of the acquired forms of syphilis in infancy is to enter upon a subject about which there have been the most ardent debate and controversy. That accidental syphilis is rare in infants, as they are not exposed to the ordinary channels in which infection is incurred in adults, will not be denied. Much of the uncertainty and contention regarding its manifestations undoubtedly arise from the lack of clinical material necessary for forming more definite conclusions. No one observer has seen a sufficient number of cases to entitle him to speak dogmatically on the question. Notwithstanding this, there has been dogmatism more than sufficient on the part of most writers on the subject, and I fear that only recently I may have laid myself open to the same charge. In what follows, then, I should preliminarily state that any conclusions I may draw have been formed on a limited experience of eight cases of acquired syphilis in infants under a year old, although this experience has been supplemented to some extent by a larger one of acquired syphilis in children of older age. It may well be, then, that further opportunities may lead me to largely modify my present views concerning the acquired forms in infancy. The only difference Colles recognised between the acquired and inherited forms in infancy was the liability of the mother, as well as the nurse, to contract the former. In fact, he gives cases where healthy infants were contaminated by infected nurses and makes no distinction between the syphilis so acquired and that inherited from the parents. Most writers before and since his time have concurred in making no distinction between the acquired and inherited forms in infancy. Diday, however, would seem to have recognised a difference in the two forms, for he writes: "Congenital syphilis does not assume either the behaviour, the progress, or the concatenation of symptoms of the syphilis of adults. A little observation suffices to show that we have here two diseases, analogous but not identical; that if their prognosis differ, it is less on account of the age of the subjects they attack than from the nature and character peculiar to each of them. Producing previous to any characteristic symptom a kind of atrophy or stunted condition of the whole economy, breaking out afterwards at a hundred points at the same moment, accompanied from the first by visceral lesions foreign to acquired syphilis, contagious by its slightest symptoms, congenital syphilis can only be compared to itself, and it is from its energy, much more than from the weakness of its victims, that we must ask the secret of the special dangers which it involves." Further, again, Diday writes: "Syphilis, so often fatal in new-born children when inherited from their parents, scarcely ever compromises their existence when it has been accidentally innoculated from a primary chancre in an adult." Whilst not agreeing with Diday as to the special virulence of infection attaching to congenital syphilis, I am at one with him regarding the differences between it and the acquired form, and especially so as to the much diminished constitutional disturbance in the acquired form in infancy. Mr. Hutchinson has no separate description of the symptoms of the acquired form in infants, possibly because he deemed it unnecessary, but in writing of the inherited variety he says: "Excepting in the addition of 'snuffles' these secondary symptoms are much the same as those observed in the acquired disease." It is not a just assumption from this last that Mr. Hutchinson

denies the presence of "snuffles" in the acquired syphilis of infants, as his description of the acquired disease was drawn from that presenting in adults. If, however, his description be intended as universally applicable to the acquired form, whether in adults or infants, then the absence of snuffles in the last must be considered as a valuable criterion in differentiating them from cases of the inherited variety, where "snuffles" plays such a frequent and conspicuous part. According to Dr. Radcliffe Crocker, "Acquired syphilis in children and infants presents much the same symptoms and runs much the same course as in the adult, except that in very young children the bones at the junction of the epiphyses to the shaft are very likely to be the seat of inflammation." With regard to the similarity of the acquired form in infants to that in adults Kassowitz is in accord with Dr. Crocker, although he goes further in this direction than I gather the latter is inclined to follow. "When a healthy infant," Kassowitz writes, "is infected shortly after birth its syphilis does not differ from that of an adult, *but does so most markedly from that of a child of the same age with the inherited complaint. The difference between them, then, is one not merely due to age.*" Kassowitz has tabulated the differences between the inherited and acquired forms in infancy and his numeration is briefly as follows:—1. In the inherited form there is early involvement of the abdominal viscera, which involvement is often intra-uterine and may precede the skin eruption by months. In the acquired form any affection of the viscera is always a late symptom and seldom occurs. 2. In inherited syphilis there is a peculiar and characteristic affection of the calcifying cartilage and growing bone; this "epiphysitis" occurs early and may be intra-uterine. The early appearance and extensive distribution of this "epiphysitis" in inherited syphilis have no analogy in the acquired complaint. 3. In inherited syphilis there is frequently diffuse infiltration of the skin, especially of the face, soles, and palms. In acquired syphilis there is no such infiltration observed either in infancy or later age. 4. In inherited syphilis there is a peculiar characteristic appearance and distribution of eruption different from those obtaining in acquired syphilis in infancy. 5. In inherited syphilis vesicular eruptions are frequent, but are never observed in the acquired form. 6. In inherited syphilis prodromal coryza is almost universal, but is absent in the acquired complaint. Such are mainly the criteria by means of which, such a judicious and experienced writer as Kassowitz asserts, a distinction can be clearly made between the inherited and acquired forms in infancy. With most of the distinctions drawn by Kassowitz between the two forms of the complaint in infancy I personally agree. As minor details, however, I cannot regard a vesicular eruption as a common occurrence in the inherited form, nor can I, after reading Dr. Crocker's cases, lay the same stress as Kassowitz does on the difference between the manifestations of "epiphysitis" in the two varieties of the complaint. As far as my experience goes the commonest eruption in acquired syphilis in infants, as in adults, is the well-known roseola and its usual distribution, the same at all ages, viz., the front of the chest, the abdomen, and to a less degree the flexor aspects of the limbs. This syphilitic roseola, admittedly rare in inherited cases, was the form of eruption in seven out of my eight cases. In the remaining one, an infant that had acquired a chancre on the back of the neck from kissing by a syphilitic aunt, and that had in its turn given its mother a chancre on her breast, a universal small pustular eruption broke out all over the body. Along with the rash, too, in most of my cases I found a condition of throat identical with that occurring in adult syphilis; this is in marked contrast with what happens in the inherited form, where the throat remains, as a rule, unaffected. The chief peculiarities of the symptoms, however, in acquired syphilis in infancy are the scantiness and evanescent nature of the eruption, which may be easily missed, and the subsequent early and luxuriant growth of condylomata. These peculiarities of acquired syphilis in children were pointed out by Henoch, who apparently did not deem its manifestations identical with those of the inherited form. Dr. Barlow informs me that he has found a difference in the appearances and distribution of the eruption in acquired syphilis in infants from that occurring in the inherited variety, and that his experience tallies with that of Henoch with regard to the appearance of condylomata in the former complaint. My colleague, Mr. R. W. Parker, too, emphatically asserts the resemblance of the acquired form in infancy to that in adult age, and the manifest points of difference in the symptoms to those occurring in the inherited form. In very rare instances it may be that the eruption of inherited syphilis may imitate that of the acquired form, so that a reliable opinion as to which of the two is concerned must be formed from other considerations than the mere rash and its distribution. In contrast to this, in no instance have I seen or learnt of the symptoms of the acquired complaint approximating to those of the typical ones of the inherited variety. I would freely admit, however, in spite of the evidence and authorities I have given as to the differences between acquired and inherited syphilis in infancy, that there is perhaps no one single symptom which would serve as an absolute mark of distinction between the two complaints. When all the symptoms are, however, taken into consideration I would contend that sufficient criteria exist in most cases to prevent confusion between them.

Of the primary chancre, a fundamental necessity for the existence of acquired syphilis in infants, I have as yet said nothing, preferring an attempt to point out the differences between the complaint and the inherited form apart from its consideration. There is, of course, no need to insist upon a chancre as the primary factor in the acquired syphilis of infants, as in adults, before my present audience. Only too often, however, within my personal knowledge, owing to reckless charges against public vaccinators and others, has occasion arisen for the insistence of a chancre and of the necessary incubatory periods in acquired syphilis in infants. When the fact is firmly grasped that such syphilis in infants runs the same course, both in its primary and secondary manifestations, as in adults, most of such charges will cease to be brought or seriously entertained. The vast majority of chancres in infants must, from the nature of the case, be situated on the skin or other external part of the body, and present the same conspicuous features in them that chancres do in adults in the same situations. With the minute examinations that infants undergo for "spot or blemish," usually twice a day, there is small chance in them for a chancre to be passed over by even the most careless mother, no matter how frequently they may be missed in adults. Even when a chancre has passed away, moreover, it leaves visible and tangible traces of its former presence, lasting for months or perhaps years, which are generally easy to find in an infant's tender skin. The sticklers for the rigidity of Colles' law universally allege, when supposed exceptions to it are brought forward, that such exceptions are cases of acquired syphilis in which the primary chancres have been missed. It is to me a remarkable coincidence that it is mainly in such cases where a presumption of acquired syphilis is made to uphold the law that such conspicuous objects as infantile chancres are missed and leave no traces behind them, and that there is a total lack of evidence as to the source of infection. In each one of my eight cases there was no difficulty in ascertaining the original site of inoculation.

Another special point about acquired infantile syphilis is its power of infection. This I propose to leave until I have dealt with the infectiousness of inherited syphilis, which I now proceed to do.

On no other point in syphilis has there been more contradictory teaching than on that of the infectious nature of the lesions of the inherited form. Whilst some authorities have described inherited syphilis as exceptional in the contagious property of all the lesions it engenders, others have denied the contagiousness of inherited syphilis at all. Since the works of Diday, however, his teaching has apparently been accepted as the standard one, and the extreme virulence of the contagion of inherited syphilis has been promulgated by most writers, many of whom I suspect in this instance were more influenced by the authority of accepted doctrine than by the result of their personal experience. The opinions of the older writers on the point are difficult to gauge, as they classed cases of transmission from infant to nurse with those of transmission from nurse to infant, and seemingly deemed any discrimination between the two classes as of little moment. Hunter, in the days when he still believed in the reality of inherited syphilis, denied the possibility of transmission from the infant to another person. The elder Cullerier and most authorities up to the time of Colles would seem to have agreed with Hunter on this point. When Colles, however, published his book in 1837 he rudely upset the prevalent belief in the non-contagiousness of inherited syphilis. It

was, according to him, the peculiar virulence of the contagion of infantile syphilis that distinguished this last from the adult type. It was not necessary, he wrote, for a woman to suckle a syphilitic infant to acquire the complaint from it—it was sufficient for any one to do so merely to dress, handle, kiss, or fondle such an infant. In fact, he would seem to have imagined the mere presence of such an infant as a menace to the unprotected and to have believed in a real "aura syphilitica" emanating from it. More than this, he again writes: "The members of the nurse's family may also contract the disease, and more easily than she, for this disease seems to acquire more force the further it becomes removed from its first origin." Most of Colles' personal observations are of little value now, as he indiscriminately mixed up cases of acquired and inherited syphilis in infants, and drew deductions from them as though they were of identical nature. He did not, moreover, acknowledge a primary chancre as a necessary part in the contraction of syphilis by an adult. For him to diagnose syphilis in a woman suckling an infected child it was sufficient that she had ulcers or other sores about the nipples, and he remarks the curious fact that in such cases the disease often limited itself to these manifestations on the breasts. Diday, following in the same steps as Colles, went even beyond the last, if possible, in his estimation of the power of contagion of inherited syphilis. "I have already stated," he writes "and hope to prove it, that the lesions of congenital syphilis differ from those of ordinary syphilis by an infinitely greater power of contagion. And what is at the same time remarkable and deleterious in them is that they transmit the same property to the person who receives the disease from them." He considers this virulence of contagion so well established that if he saw a woman presenting signs of constitutional syphilis transmit them to her husband the suspicion would at once arise in his mind that they were congenital in character and derived from a child with inherited syphilis nursed by her. If, moreover, he learnt that a nurse had given syphilis to several men, he would consider that there were sure reasons that she had acquired the disease, not by coitus, but from suckling an infected nursling. He writes of the infection of nurses as being of daily occurrence, of thousands of examples of it being readily adducible, and he gives accounts where the presence of a single case of inherited syphilis has produced in healthy rural communities outbreaks of syphilis that can only be described as "volcanic," from the suddenness of their incidence and the numbers that were attacked. Notwithstanding the confidence and dogmatism with which Diday wrote, there were even in his own time authorities who differed strongly from him, and Ricord, the younger Cullerier, Basseteau, and others would seem to have regarded the contagion of inherited syphilis as a chimera. Maisonneuve and Montanier, too, declare that "doubt is no longer permitted" as to the non-contagiousness of inherited syphilis Diday quotes all these last named, and, in the face of their writings, it is difficult to appreciate the following remark of his. "All observers have pointed out the propagation of the symptoms by the slightest contact from the new-born child to the nurse, and it is not uncommon to see two or three families victims to the presence of a single syphilitic suckling." As to the reliance and value to be placed on Diday's opinion on the point, the following controversy is both instructive and interesting. "Remark well," Ricord writes, "that I do not absolutely reject this mode of transmission from the foster-child to the nurse, and from the nurse to the foster-child. I only say, without leaving the field of strict observation, and of the exact analysis of facts, that this mode of transmission is not yet proved." Diday rejoins, "I have no difficulty in acknowledging with him (Ricord) that among the clinical facts advanced in proof of this mode of contagion there is not one which is thoroughly demonstrative, there is not one in which the daily observations of the symptoms—on the one hand in the nurse, her relations, and those around her, on the other, in the child, its father and mother—render it evident that symptoms really constitutional have passed from the one to the other; but—and in this I regret to differ from Ricord—I am inclined to think that if the conclusive fact be wanting probable facts abound, and that to such an extent as to make up by their number for the absence of the former." In the face of his "thousand histories of infectious lactations furnished daily by experience," Diday's inability to adduce one single conclusive example is both startling and inexplicable. His evidence of the conveyance of syphilis by nurslings, too, is not convincing in the light of our present knowledge. "Primary chancres," he writes, "exist in a very small minority of cases of nurses infected by infants. Mucous tubercles form the earliest symptom in each." It is significant, too, in his cases, as in those of Colles, that the syphilis contracted by nurses from infected infants very often remained confined to the affected breast and never manifested itself by symptoms elsewhere. But the disparity between the dogmatism of Diday on the virulence of the contagion of inherited syphilis and the proofs he adduces for it is only one amongst many inconsistencies that are to be found in his writings. It may be said that, feeling as I do regarding some portions of these writings, I have devoted too much time to their consideration. But as Diday's views are still commonly held, and he is largely quoted, no one can afford to lightly ignore him. I will proceed to discuss at less length some more recent opinions on the important point at issue.

Henoch considers the occasional transference from infant to nurse as proven. In his own vast experience, however, he had never known an instance of it. Fournier writes as if the contraction of syphilis from cases of the inherited disease were extremely common and of daily occurrence. An infant with this complaint, he asserts, would not infect its own mother, but would almost infallibly infect a healthy nurse. In fact, Fournier would seem to be a living exponent of Diday's views as to the virulence of the contagion of inherited syphilis. Mr. Hutchinson says that if an infant suffering from inherited syphilis be suckled by a nurse free from taint, "the risk is great that a nipple chancre will result." But as he further says that he has only known "perhaps half-a-dozen" nipple chancres altogether, his words would seem to me to exaggerate the risk incurred, more especially when his large experience is taken into consideration. Most latter day writers are in accord with Mr. Hutchinson, and in recent text-books inherited syphilis is described as "eminently contagious," or in kindred words to the same effect.

At the present time there would seem to be a growing opinion that the virulence of contagion of inherited syphilis has been vastly exaggerated both in text-books and by authorities, and that the contraction of the complaint by a healthy person from a tainted infant is an extremely rare occurrence. Some two years back I published a case of supposed exception to Colles' law, the weak points in which were justly and forcibly dealt with by Dr. George Ogilvie. His latest description of it as "not absolutely conclusive" I think a decidedly appropriate one for the case. If this case be rejected, however, and the supposition that the infant was really suffering from acquired and not inherited syphilis be maintained then I have personally never known an instance where syphilis was contracted from an infant with the inherited complaint; and this in spite of many thousands of healthy children and adults having been exposed to infection from cases under my care. To ascertain if my experience was in any way exceptional in this respect I have made inquiries of present and former colleagues at the East London Hospital for Children, all of whom have had a large acquaintance with cases of inherited syphilis. The results of my enquiries are so much at variance with prevalent belief that I feel it incumbent upon me to give the names of the gentlemen I consulted, and this, I may state, is done with their full consent. My senior medical colleague, Dr. Eustace Smith, has only known one instance where syphilis was contracted from an inherited case, and this was one where an infant infected its own mother. The case was seen by the late Mr. Berkeley Hill, who demonstrated to his own satisfaction, but not to that of Dr. Smith, that the infant was suffering from acquired and not inherited syphilis. Dr. Smith still believes that the case was one of exception to Colles' law and apart from it has never known syphilis contracted from the inherited disease. Dr. Donkin, Dr. Dawson Williams, Dr. Arnold Chaplin, and Dr. J. A. Hayward have never known an instance where an infant with inherited syphilis has infected another person. Dr. Johnstone Campbell has known one case of exception to Colles' law, which he proposes to publish when at greater leisure, but no other example of infection from inherited syphilis has come under his notice. Dr. Radcliffe Crocker has known one instance where an infant with inherited syphilis contaminated its foster-mother and her daughter. Mr. R. W. Parker has stated that he had seen a case of exception to Colles' law, but no other example of infection from inherited syphilis. Messrs. L. A. Dunn,

W. H. Battle, and H. Betham Robinson have never known syphilis contracted from a case of the inherited disease, and present and past resident medical officers, Messrs. P. C. Phillips, Scott Battams, and Dr. E. H. Ware, reply to the same effect. Now the experience at the East London Hospital for Children of the gentlemen I have named added to my own represents a joint experience of some thousands of cases of inherited syphilis. These syphilitic babies in the East of London, too, are indiscriminately suckled by other women besides their own mothers, and are freely kissed and fondled by numerous persons who thus expose themselves to infection from this presumedly eminently contagious disease. That the sole result, as far as could be ascertained, of many thousands of exposures to infection should be only five examples of the incurrence of syphilis, and that of these four should assume the form of exceptions to Colles's law, seems to me noteworthy and surprising in the extreme. If, as usually happens, these four examples of exception to Colles' law be curtly rejected as unreliable, then I can learn only one instance where syphilis has been contracted from a case of the inherited complaint at a large children's hospital where inherited syphilis is rife amongst the infantile patients, and where adult women are frequently treated for the acquired disease. I have no reason, either, to suspect that our experience at Shadwell is peculiar. Dr. Barlow and many others of large experience tell me that they have never known the contraction of syphilis by anyone from an infant suffering from the inherited complaint. Lately I have pestered all my friends with questions on this point and as the outcome I have learnt of two other solitary examples of its occurrence. My friend, Dr. John Thomson of Edinburgh, tells me he knows a case where a lady contracted a chancre upon her lip from kissing a grandchild with inherited syphilis, the father of the infant having incurred the disease about three years before marriage. Dr. W. S. Colman, too, tells me he knows a case where a baby with inherited syphilis infected its nurse. But three cases go but a little way to justify the descriptions usually applied to the power of contagion of inherited syphilis, especially when the experience and standing in the profession of those from whom I inquired are taken into account. That inherited syphilis is occasionally contagious is certain, but it is equally certain, I would contend, that the virulence of such contagion has been grossly and vastly over-estimated. It is impossible to reconcile the experience of certain French writers in this respect with our experience in this country, even when the greater frequency of wet nursing in France is fully admitted. There are certain reasons, or suggestions rather, by which I think the infrequency of the contraction of syphilis from infants suffering from the inherited complaint can be partially explained. The syphilis in such infants, it must be remembered, dates from conception and not from birth, and at the age at which symptoms appear such a syphilis is generally of about a year's standing, and may have lost some of its pristine virulence during both uterine and extra-uterine existence. If the views I expressed in my first lecture, too, be considered as worthy of any consideration, then it may be that some product absorbed by the mother during her first pregnancy may influence the succeeding conceptions and thus largely modify the disease in the infants resulting from them and its power of contagion. In this way I should expect a first infant more likely to convey the disease to others than succeeding ones, and I have a general impression that the histories of recorded authentic cases of such infection confirm this opinion. That the power of infection is possibly in some measure confined to the first infants in a family may help to partially explain the rarity of infection. Another reason, and a much weightier one, for the infrequency of infection from inherited syphilis is the rarity of specific sores about the mouths of infants, a fact which has been pointed out by Dr. Colcott Fox, Henoch, myself, and others. Even when such sores do appear they are a comparatively late manifestation, seldom occurring before the age of six months, and by this period, in the vast majority of instances, both treatment and time have probably so modified the complaint that conveyance to others is either in abeyance or annulled. It may be that the nasal secretion and that of mucous tubercles are infectious, but as the latter are a late manifestation the same reasoning applies to them as to sores in the mouth, and there are obvious reasons why the nasal secretion is not often encountered. The reasons I have given are, I admit, totally inadequate for a full explanation of the extreme rarity of infection from inherited syphilis, and whilst I consider that rarity established other grounds for it than those I have suggested are still to be sought.

In marked contrast to the rarity of infection from inherited syphilis is its frequency from the acquired form in infants. Only one instance is within my personal knowledge where a syphilis acquired by an infant was not communicated to one or more persons brought into contact with the child. Numerous instances are on record, from the time of Ambroise Paré onwards, where infantile acquired syphilis has been the cause of severe outbreaks amongst relatives and friends. Recently I learnt of one in the east of London where acquired syphilis in a child spread to five others in the same family besides strangers. Some of the best authenticated cases, too, recorded by Colles and Diday, who contended for the greater virulence of the inherited form, occurred where numerous persons contracted the disease from an infant with the acquired disease. In fact, it would seem to me that what these writers really contended for was more the extra virulence of infantile syphilis generally than for any difference between those of the acquired and inherited forms. Although the presence of acquired syphilis in an infant is the more dangerous to the community at large, there is, I need hardly say, no difference in virulence between such a syphilis and that acquired by an adult. But the presence of the dread disease in an innocent-looking baby is so seldom suspected that generally one or more persons are contaminated before the truth is discovered—a condition of affairs that does not often occur in the case of adults. So nearly constant, however, is the infection from an infantile acquired case, and so extremely rare that from one of the inherited form, that, in the lack of other criteria, a diagnosis between the two varieties might almost be made from the presence or absence of infection in most instances.

The few minutes remaining at my disposal I will devote to some brief considerations of Colles' law. This law in reality consists of two separate parts, the one that the mother of an infant with inherited syphilis cannot contract the disease from her own child, and the other that such an infant would almost infallibly contaminate a healthy wet-nurse. The fact of the inclusion of this second proposition is generally forgotten by writers contending for the absolute validity of the law. In dealing with the contagiousness of inherited syphilis I endeavoured to show that this part of the so-called law is far from true. It may well be, then, that the main safety of the mother lies in the little liability of the infant to transmit the disease rather than in some protective quality residing in herself, due to the fact of her having borne a syphilitic infant. For my part I think both such factors possibly conduce to the safety of the mother. Is the first part of Colles' law absolute? Has an infant with inherited syphilis never contaminated the mother? In Colles' own practice, and in those of others since his day, cases have from time to time occurred which were apparently exceptions to the law. Some of these cases are so imperfectly recorded that discussion of them is hardly called for. Others, on the contrary, Dr. George Ogilvie writes, "are as conclusive as any recorded clinical facts can be." Fournier, somewhat grudgingly it would seem to me, admits the validity of some such cases, and he would appear to regard the subject of exceptions to Colles' law as of little practical importance on account of the extremely exceptional character of such exceptions. Mr. Hutchinson has lately stated that he not only admits the possibility but the probability of these exceptions. I am the more pleased at this admission in that it places him in accord with Fournier and other authorities in the matter, and that it is also in some sense a further justification for the belief in myself and others that we have actually met with exceptions to Colles' law. Mr. Hutchinson's sole contention is, I believe, that as yet no exceptions have been recorded worthy of trust. I am unwilling to differ from him, but I must state my conviction that Dr. George Ogilvie's admirable paper at the Royal Medical and Chirurgical Society is conclusive on the point. Granted the possibility of exceptions to Colles' law, ought such eminently infrequent occurrences to largely modify our practice in allowing apparently healthy mothers to suckle tainted infants? Personally, I should say decidedly not. In my second lecture I emphasised the importance of maintaining the nutrition of the infant, and for this purpose no factor is more essential than the mother's milk. If ever legislation for the many to the detriment of a limited few is justifiable, the case in question calls for it. Following in the same path as Henoch, the only limitations I would place on suckling by mother or wet nurse would be the presence of excoriations on her nipples

and that of ulceration or fissures about the mouth of the infected infant.

In conclusion I have to apologise for the disjointed and fragmentary character of these lectures. In reality they deal with only a very limited portion of the subject of infantile syphilis. Important questions, such as diseases of the nervous system, vaccinal syphilis, prognosis, treatment, and many others, I have preferred to altogether omit rather than to attempt to treat in a perfunctory manner. In fact, my selection has been manifestly based on controversial grounds rather than any other.

RHEUMATOID ARTHRITIS: ITS CLINICAL HISTORY, ETIOLOGY, AND PATHOLOGY.

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With a Report on its Bacteriology

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UNTIL quite a few years ago rheumatism, like gout, was almost universally regarded as a disease of "chemical" origin. Lactic acid, as a product of disturbed metabolism, played the part of uric acid in gout, and the possibility of a pathogenic micro-organism scarcely entered into the range of serious discussion. Even three years ago, when first we started on our search for the *materies morbi* of rheumatoid arthritis, the idea of an organism as a causative factor in any one of the group of "rheumatic" diseases seemed somewhat wild and improbable; but since then several suggestive papers, notably that of Newsholme,[1] have thrown fresh light on the subject, and have at least accustomed one to the idea that acute rheumatism may probably prove to be an acute specific disease caused by a definite pathogenic microbe. It was the close analogy of rheumatoid arthritis to tuberculosis that first suggested to our minds the possibility of a micro-organism as the cause of the disease; and, once started on that idea, the clinical symptoms, so difficult to account for on the usual nervous and other theories of causation, readily fell into their place in a natural and explicable sequence until long before we had actually found the organism we were quite convinced of its presence.

But at the very outset we were met by great difficulties in obtaining pathological material. Clinical material we had in abundance, but the opportunity of examining post mortem the joints of a patient suffering from rheumatoid arthritis was an event of such extreme rarity that we were forced to be content with the examination of synovial fluid obtained during life. And here, again, of course, came the difficulty that the number of cases of synovial distension honestly likely to be benefited by tapping was extremely limited, forming a very minute proportion of the hundreds of cases passing through our hands; in consequence there was great delay and we had often to wait months for fresh material. The cases from which our synovial fluid was, as a rule, obtained were those of rheumatoid arthritis in which there was great distension of a joint, generally the knee, occasionally the wrist or fingers, which did not yield to blistering and other medical means. In such a case, the skin over the joint having been made aseptic and a simple form of aspirator carefully sterilised, the needle was plunged into the joint and the fluid withdrawn. Often, although the joint seemed distended with fluid, none could be obtained in the aspirator bottle, but in such cases there would generally be found a drop of fluid or a plug of synovial membrane in the point of the needle which would be sufficient for our purpose. With a sterilised platinum wire various culture tubes were then inoculated on the spot, several coverslip preparations made of the fluid or membrane, and the fluid in the bottle retained for further examination in the laboratory. The limb was placed on a splint for a few days, the needle-wound being dressed with cyanide gauze, and slight pressure kept up with a bandage. The aspiration generally relieved the pain, but often the fluid would return requiring a second and sometimes even a third tapping. In no case was any injurious effect apparent on the joint. In the microscopic preparations so obtained we found in 24 cases out of 25 rheumatoid joints examined: (*a*) a micro-organism; (*b*) always the same organism, so far at least as size, appearance, staining properties, and behaviour in culture media were concerned; and (*c*) the organisms were present in considerable, sometimes in enormous, numbers. To Dr. Blaxall of the British Institute of Preventive Medicine, to whom we are very greatly indebted, we leave the task of describing, with fuller detail and with more practised hand, the appearance, the properties, and the life-history, so far as is at present known, of the microbe as found by him in the specimens of synovial fluid which we have sent him.

Before going on to discuss the etiology of rheumatoid arthritis let us make it perfectly clear of what disease it is that we are speaking. Probably in no department of medicine is there more hopeless confusion of nomenclature than in the group of so-called "rheumatic" diseases. An acute disease with its rapid onset, its definite course, and its tangible and immediate results can hardly fail to impress the observer; it is seized upon, studied, named, and classified. With a chronic disease, on the other hand, the wearisome chain of indefinite symptoms ends by wearing out alike the time, the patience, and the interest of the observer; and hence it is that under the heading of chronic rheumatism or of osteo-arthritis there are probably massed almost as many diseases as formerly there were under "fever" or "paralysis." Provisionally, then, we divide the rheumatic and allied groups as follows: (1) acute rheumatism, (2) chronic rheumatism, (3) gout, (4) rheumatoid arthritis, and (5) osteo-arthritis.

And here let us pause for a moment to point out what we mean by chronic rheumatism and by osteo-arthritis. To the heading of chronic rheumatism we would relegate those cases of stiffened, painful, and often distorted joints left as a sequel of acute or subacute rheumatism, the distortion in this case being apparently due to alterations in ligaments, tendons, and muscles, rather than to bony or cartilaginous changes, these latter, if present, being only secondary and due to superimposed osteo-arthritis. Absolutely indistinguishable clinically is the great group of cases in which there is no history obtainable of acute rheumatism, but which are yet known familiarly to everyone as chronic rheumatism. Whether these cases are really identical with the last is uncertain, but in the present state of our knowledge we must be content to allow them to remain in the same category.

It is when we come to osteo-arthritis that we begin to tread on uncertain ground. In the official nomenclature rheumatoid arthritis and osteo-arthritis are used as interchangeable terms for the same disease, but of late, with the further differentiation of the clinical features, there has been a growing tendency to retain the term rheumatoid arthritis for the specific disease we are about to describe and to keep osteo-arthritis for the more common mechanical condition characterised by lipping of bone, osteophytic growth, and erosion. As it seems a pity to attempt to add fresh words to our nomenclature we have retained the term rheumatoid arthritis for use in this narrower sense. By osteo-arthritis, then, we mean a local joint condition in which we find erosion of cartilage, thickening, eburnation, and lipping of bone, with or without fluid effusion. These changes may arise in a joint injured by accident, by occupation, or by the mere wear and tear of life; in such cases the affection may be a mon-arthritis, or, if multiple, asymmetrical, and picking out the joints in a definite manner and according to well-known physical laws, as shown long ago by Arbuthnot Lane, a summary of whose views will be found in a recent number of the *Clinical Journal*; or they may appear to be merely secondary changes ensuing in a joint already damaged by rheumatism, by gout, or by rheumatoid arthritis. In the latter case the joints involved may be multiple and the disease may appear to exhibit a quasi-symmetry. The condition appears to be purely local, and, except in so far as pain and inactivity hamper the functions, the rest of the

[1] THE LANCET, March 9th and 16th, 1895.

Showing characteristic spindle-shaped swelling of Phalangeal joints, swelling of wrist and muscular atrophy.

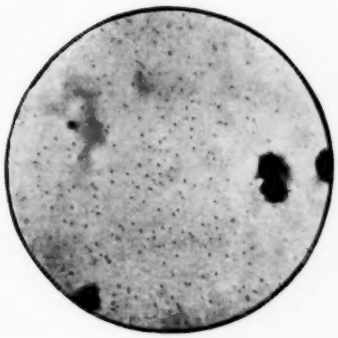

Fig. I.

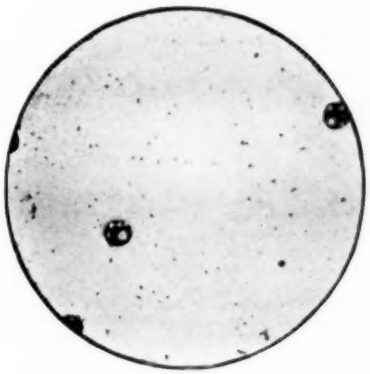

Fig. II.

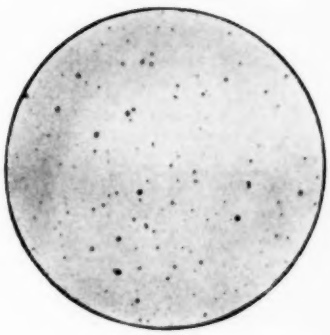

Fig. III.

TO ILLUSTRATE AN ARTICLE ON RHEUMATOID ARTHRITIS BY DR. GILBERT A. BANNATYNE, DR. ARTHUR S. WOHLMANN, AND DR. FRANK R. BLAXALL.

organism would seem to be absolutely unaffected by the disease.

Turning now to rheumatoid arthritis, we find a very different state of affairs. It is a "constitutional" rather than a local disease; the whole organism is affected; the joint condition is by far the most important *symptom*, but it is only a symptom, and not the whole disease. In contradistinction to osteo-arthritis, rheumatoid arthritis is a disease of women rather than of men (of 100 consecutive cases taken at random 85 were females and 15 were males); of comparative youth rather than of age (the average age of the above series of cases at the commencement of the disease was twenty-eight, the eldest sixty and the youngest four). There would, however, appear, as pointed out by Fortescue Fox and others, to be two periods of greatest frequency of onset: one—and this embraces the larger number of cases—of early adult life, say from eighteen to twenty-five; the other the period of the climacteric. With respect to the family history we are unable to make any very definite statements. Hugh Lane[2] maintained that the disease is caused by the amalgamation of the hereditary taints of gout and tubercle. From our own experience we are unable either to confirm or refute this statement. In the case of a child who died from rheumatoid arthritis we were fortunate enough to secure a family history through four generations on the mother's side and two on the father's. In this case, of eight brothers and sisters, one died in infancy and six were very "delicate"; the mother suffered severely from rheumatism, while her three sisters had acute rheumatism and heart disease; the grandmother had "rheumatism," while the great-grandmother died from phthisis. On the other side, the father was normal; the grandfather had "rheumatism." Anyone, however, who has gone into the subject of family history in hospital patients will admit the extreme unreliability of the statements obtained. Rheumatoid arthritis is predisposed to by any debilitating cause, more especially by anything particularly weakening the resisting power of the joints. Of all predisposing causes acute rheumatism seems to be the most potent (of the above series of 100 cases 38 gave a history of previous acute rheumatism). But here two obvious fallacies have to be taken into account. The onset of the disease if at all acute, as is not unfrequently the case, may be mistaken for a mild attack of acute rheumatism; while, on the other hand, in the rheumatic fever of childhood the joint symptoms are often so little pronounced that the nature of the disease is entirely unsuspected. In a very large proportion of the cases we find a history of menstrual disturbance, amenorrhœa, dysmenorrhœa, or too frequent menstruation; in a still larger proportion the menstrual trouble comes on after the rheumatoid disease has well developed.

Amongst other debilitating causes should be mentioned the chlorosis of puberty, rapid child-bearing, prolonged lactation, worry, over-work, ill-feeding, and such diseases as typhoid fever. As a rule, the first manifestation of the disease is the gradual onset of a painful spindle-shaped swelling of the proximal interphalangeal joints of the ring- and middle-fingers; sometimes the pain precedes the swelling, sometimes the swelling precedes the pain. Usually both hands are affected within a few months of each other. Occasionally the disease commences in the wrists; rarely in other joints—e.g., the knee. Spreading fairly symmetrically from joint to joint the disease involves, in definite order of frequency, the wrists, the rest of the fingers, the articulations of the cervical vertebræ and of the jaw, the knees, elbows, ankles, tarsal-joints, and shoulders. The other joints usually escape, though the hips occasionally suffer, and we have seen the toes spindle-shaped like the fingers, though this is rare. The thumbs and great toes generally escape.

Clinically the joints may be affected in one of two ways. There may be a deceptive appearance of bony nodular enlargement; this is most noticeable about the finger-joints and is usually due to tense distension of small synovial pouches connected with the joint cavity; firm pressure with the finger will show the true nature of these swellings, while unexpected confirmation of this opinion has recently been furnished by the application of the Roentgen rays, but more often there is a soft, doughy-looking swelling blurring the outlines of the articulation. In such a case there appears to be little or no fluid in the joint, but the synovial membrane is greatly thickened and swollen, while the ligaments and fasciæ about the articulation are softened and infiltrated. Bony grating is not obtained in such a joint; it is only later, when secondary osteo-arthritic changes have taken place, that the harsh grating of erosion is obtained. The skin over an affected joint generally feels distinctly hot to the touch, and if the process is at all acute there may be a distinct blush closely resembling that of acute rheumatism. The pain is usually severe, fluctuating considerably, and in some cases apparently largely influenced by changes of weather. The body temperature is generally raised about a degree at night, falling to normal in the morning. In children, in whom the disease is always more acute, the temperature may rise to 101° F. or even more every evening. Another peculiarity of the disease in children, to which Dr. G. F. Still first drew our attention, is the frequency with which the lymphatic glands are enlarged. We have noticed this, too, in acute cases in adults. As the joint trouble becomes pronounced other symptoms appear and advance with it *pari passu;* occasionally they may even *precede* any manifestation of articular disturbance (Dr. Spender).[3] Anæmia is generally noticeable early in the case and may become profound: it appears to be due rather to deficiency of hæmoglobin than to destruction of corpuscles. Muscular atrophy is a very marked symptom and one always present. Although as a rule there is a general atrophy of fat and muscle distributed over the whole body and contributing to that cachectic facies so universal in this disease, yet there is a distinct selective agency at work. Some muscles suffer more than others, notably the extensor muscles of the forearms, the abductor indicis, the interossei, and the muscles forming the thenar eminence. Muscles, if affected at all, suffer throughout their entire length, and the atrophy is not limited to the portion near or distal to a joint. The reaction of degeneration is not usually marked. In addition to the muscular atrophies there are various other evidences of trophic and vaso-motorial disturbance. Sudden flushing of the skin of the whole body with copious outburst of sweating is common, while a very profuse cold perspiration of the palms of the hands and fingers is present in almost every case, and may be so copious as literally to drip off. The extremities are usually cold and clammy, and a peculiar livid mottling of the hands, especially over affected joints, is common. The fingers have a great tendency to "go dead," and in five cases we have seen this condition so marked as to merit the title of Raynaud's Disease, there being actual gangrene under the nails. In none of these cases was there any hæmoglobinuria. It was Dr. Spender who first drew attention to the pigmentary changes of the skin in this disease. The changes may consist of minute black freckles, most common on the backs of the forearm, of dark washes of colour under the eyes or across the forehead, or of a general darkening of the complexion. The same writer, too, draws attention to the changes in the cardiac rhythm and lays great stress on the tachycardia often present. We would wish to point out in addition that it is by no means rare to find an apical systolic bruit (? hæmic) in cases of rheumatoid arthritis in which no history can be obtained of a previous attack of acute rheumatism, while it is quite common to find a booming alteration of the first sound. Pericarditis is occasionally found, but how far it is of a rheumatic and how far of a rheumatoid origin is at present uncertain. Ecchymoses in the skin are quite common. Peripheral neuritis may be present, but there is never any marked disturbance of the sensory nerves. The reflexes, as a rule, are normal.

To sum up, then, the points of special significance in the diagnosis of the disease are: (1) the sex and age of the patient; (2) the soft spindle enlargement of the finger-joints and the swelling of the wrists; together these form the most constant symptom, and in nine cases out of ten the disease can be easily and certainly diagnosed from the hands alone; the accompanying illustration shows excellently the typical deformities, together with the atrophy of the interossei; (3) the cold sweating palms; (4) the affection of the jaws and neck; (5) the cachexia and wasting; and of less importance (6) pigment changes and (7) tachycardia. It is hardly within the scope of this paper to enter into the subject of treatment. At best it is but unsatisfactory. Treatment based on the assumption that the disease is a "rheumatic gout," with consequent deprivation of meat and stimulants, may soon bring the patient to an almost moribund condition. The resisting powers of the tissues must be strengthened to the utmost; rich, nourishing

[2] The Rheumatic Diseases (so-called).

[3] Brit. Med. Jour., 1893.

food, alcohol if necessary, cod-liver oil, iron, arsenic, may all prove useful, but, above all, fresh air and sunshine. The wasting and stiffness may be relieved by massage, the stiffness and the pain, which is usually very severe, by hot baths and mild counter-irritants. The prognosis as regards life is fairly good; as regards complete recovery extremely bad. The disease steadily progresses through years of suffering until, the soft structures of the joints being destroyed, either fibrous ankylosis occurs or ordinary osteo-arthritic changes take place, and the disease, having exhausted its pabulum, wears itself out and becomes quiescent. Just as in fibroid phthisis the fibrous tissue is a protective effort of nature to limit the growth of the bacillus, so in the fibrous and osteo-sclerotic ankylosis of joints in rheumatoid arthritis we have a similar defensive action; in neither case, apparently, do the microbes survive in the new-formed tissues.

Turning, then, to the pathology of the disease, as we understand it, we have a disease due to the presence of micro-organisms found in the joint fluids and tissues, and which must until disproved be regarded as specific. How these micro-organisms gain access to the blood is not at present definitely known, but they probably do so through some chronic catarrh of the gastro-intestinal or genito-urinary systems, and such catarrhs are not far to seek. In not a few cases it has been traced, with almost absolute certainty, to the tonsils. Having gained a footing in the circulation the micro-organisms pass freely to all the organs of the body, thus explaining the symmetry of the disorder and why one joint after another should be involved. They now proceed to select a suitable midus for their growth, and, like all other pathogenic bacteria, they exercise a selective action in their choice which never varies. What governs this selective action is not known; but it appears curious that out of all the sites to which they gain access they should, so far as we at present know, only choose the joints for their habitat. We may note that joint tissues seem specially liable to bacterial infection, *vide* such diseases as pyæmia and gonorrhœa. It is possible that the endocardium and pericardium are also liable to their attacks, as otherwise it is difficult to account for the symptoms referable to those tissues. This point has not been fully elucidated, and, so far, we have no proof one way or another. Probably, also, the micro-organisms grow and propagate in the lesions through which they gain access to the blood, giving rise to those local catarrhs so common during the course of the disease. Owing to the want of post-mortem material these points must be left for future consideration. In the joints we found proof that the micro-organisms grow and propagate, doing so, not only in the synovial membrane, ligaments, &c., but also in the bone marrow and cartilaginous structures. Their presence gives rise to acute inflammatory changes leading to ulceration, erosion, and destruction of the hard as well as of the soft joint tissues. Our specimens are so few that this is only a provisional statement. This process varies in intensity and, usually as the disease progresses a coincident but varying amount of reparative change is seen, which ends in general hardening and thickening of both bones and ligaments. The presence of micro-organisms can be demonstrated in the joint fluid by staining and also in the tissues on section. The joint and heart symptoms are those only which would appear to be due to the direct action of the micro-organisms, and may therefore be regarded as primary or essential, whilst those which are due to their indirect action, through their products, may be regarded as secondary or symptomatic. These latter may vary in every case, not only in intensity, but in nature, yet they would all appear to have a common origin in toxic action.

During their life cycle these, like all other bacteria, give rise to poisonous products, which, being absorbed, pass to the body generally, and, what is of more importance, to the nervous system locally. Here, again, we see either a peculiar selective action on the part of the products acting on or else a peculiar susceptibility of the parts acted on. In this as in other bacterial diseases, we have no definite proof that it is not the micro-organisms themselves which cause the changes in the nerve system, but all argument, analogy, and proof is against it, and, therefore, we may assume that such is the case. As evidences we have the experiments of MM. Vidal and Bezançon,[4] which show that several micro-organisms have the power of producing central nerve degeneration, and although they have been isolated from the blood, yet they have not been found in the central nerve tissues. They therefore appear to act by the elaboration of a soluble poison. Such would appear to be the case in rheumatoid disease. With regard to the toxic action of bacterial poisons on the nervous system, it is of importance to note that nutritional as well as actual organic change may result. Although these nutritional changes are more common in the peripheral nerves, yet toxic agents exhibit such a remarkable selective action, and as we do not as yet know what are the influences which determine such susceptibility it would not be surprising to find similar changes in the central nerve system. From every side evidence is gathering that what may at first be only a depression of the function of a certain centre or group of centres may end, if the irritation be severe, whether it be applied locally in the shape of a toxine or reflexly, in becoming an organic degeneration, not only of that centre or group of centres, but also of the nerve path or paths descending from them. Erb,[5] speaking of progressive muscular dystrophy, says there is a possibility that the disease, starting in a functional disturbance, might in the long run become associated with a coarse lesion of the spinal centres. He says there are many things about such a condition which agree well with this supposition. From this we may conclude that bacterial poisons act on either the peripheral or central nerve systems, producing in one case an organic lesion and in another only a functional depression. Now let us look at the rheumatoid symptoms due to such a condition of the nerve system. The principal and most difficult to explain is undoubtedly the muscular atrophy which occurs not only early in the disease, but is one of the most constant symptoms. The atrophy extends to the whole of a muscle and not only to that part which is in contact with the joint or distal to it, and it follows so closely on the first appearance of the joint troubles as to preclude the possibility of an extension of the inflammation from the joint to the nerves or muscles. Apart from true rheumatoid atrophy we have atrophy occurring as a consequence of a neuritis distinctly secondary in character and only seen in the later stages. Such a condition has been described by Sabourin,[6] Valtat,[7] Strümpell,[8] Duplay and Cazin,[9] and is of less interest than the true rheumatoidal atrophy, and can be easily distinguished from it as it presents all the characters of ordinary muscular atrophy in the reaction of degeneration and alteration in the muscle structure, &c. This is absent in the true form in which the extensors are principally affected, but not exclusively so. The selective character of the atrophy is sufficient proof that the changes cannot be set down to mere disease. How, then, do we account for it? We think it is due to an abnormal condition of the multipolar nerve cells of the anterior cornua.[10] It is reasonable to suppose that, given a soluble poison circulating in the blood, some areas in the central nerve system should be affected, and these all the more especially as they are in all probability predisposed to it by reflex irritation from the joints. That such an irritation does occur has been stated by many observers and has been even said to be sufficient to cause the atrophy itself (Paget, Vulpian,[11] Charcot,[12] and others). It has been argued that, assuming a derangement of the motor cells of the cord determined by the morbid impulses from the joint nerves, the influences from the motor cells will in all probability determine the alterations in the muscle nutrition. In the light of the discovery of the micro-organisms and of recent observations with regard to the action of toxines on the nerve system we may disregard this reflex irritation, except in so far as only to regard it as a predisposing cause. On turning again to the cells themselves we find, according to Ferrier,[13] that the cell-body, with its nucleus

[4] Annales de l'Institut Pasteur, February, 1896.

[5] Progressive Muscular Dystrophy.

[6] Thèse de Paris, 1873.

[7] Archives Générales, 1877.

[8] Münchener Medicinische Wochenschrift, 1888.

[9] Archives Générales, January, 1891.

[10] The path of motor innervation is composed of two portions: (*a*) the pyramidal cell with its dendritic processes and centrifugal or axis cylinder process, coursing along the pyramidal tract; and (*b*) the spinal multipolar cell with its processes and axis cylinder process, ending in the muscle fibre. It has been shown by Golgi's (Schäfer: Brain, vol. xvi., p. 147) method of staining that the pyramidal axis cylinders end in an arborescence which merely comes into contact with the spinal cell or interlaces with its dendritic processes, there being no actual continuity.

[11] Leçon sur l'Appareil Vaso-moteur, 1875.

[12] Maladies du Vieillard, second edition.

[13] Brit. Med. Jour., vol. ii., 1893.

is primarily concerned in the nutrition of the motor nerve and its correlated muscular fibre, while the dendritic processes serve to convey incitation and functional activity. He also states that lesion of these processes may cause paralysis with all the symptoms of a spinal paralysis, but with no muscular degeneration. If such a condition can exist might we not consider it possible, nay, probable, that by the action of a toxic body the cell's action might by itself be so lowered or held in abeyance that nutritional changes in the muscles would ensue without much disturbance of the conductive faculty of the processes, and also without any degeneration of the muscle beyond wasting? In progressive muscular atrophy we have a slowly progressive lesion of the ganglion cells, and their prolongations in the axis cylinders of the nerve fibres. Might we not, on a modified scale, have such symptoms if, instead of a complete destruction of these cells, we have only a depression of their function? In fact, such a condition must exist, as we cannot otherwise account for the atrophy either by reflex or direct toxic action. The cells' activity must be lowered. In one class of case, of which those mentioned by Dr. Spender[14] may be taken as typical examples, we must assume that the action on the cells has been so great as actually to give rise to a distinct lesion, and this, spreading upwards in the pyramidal tract, has finally come to affect the bulbar nuclei. Folli's[15] discovery of atrophy of the motor cells goes a long way to confirm this theory. What was probably only at first a depression of function due to the changes set up by the rheumatoid toxine had apparently in the long run become actual organic change. With regard to the selective site of the muscular atrophy, we find Dr. Ferrier[16] saying "It is not unreasonable to suppose that the degree of representation, and therefore the trophic strength, of the extensors in the anterior cornua is less than that of the flexors, while such extensors as have the most numerous connexions with the spinal segments would have a greater vital resistance than those whose segments are fewest." From this we may deduct that those muscles with the lowest trophic representation will be those which are first and most affected in any disease which lowers the vitality of the nerves and nerve centres. Duplay and Cazin[17] have suggested that it is due to the anatomical relationship between the nerves which supply the joints and those which supply the affected muscles. This does not explain it all, however, and Dr. Ferrier's explanations seem the more probable and the more easily intelligible, especially if we add that reflex impulses may possibly help in the selection.

It has been proved that certain toxines have the power of producing changes in the vaso-motor system and also in the trophic condition of the skin. It is thus that we account for the local sweatings and pigmentation. We know that normal pigment arises from a particular product of metabolism of the cutis, being formed both in the ordinary epithelial cells and in the connective tissue cells. These connective tissue pigment cells are the regulators of the metabolic process, as they consume the surplus pigment-forming substances. The abnormal pigmentation of rheumatoid arthritis is probably due to a local increase in the formation of the normal pigment consequent upon some abnormal trophic innervation and to a deficient consumption of the surplus by the connective tissue cells. The vaso-motor changes are in all probability due to the centre situated in the cells, in the intermedio-lateral tract being affected in a similar fashion to those in the anterior cornua. One of the chief points of interest is the tachycardia. Bezançon[18] states that tachycardia may in some cases be due to pressure on the vagus, but he suggests that more often it is due to the absorption of certain toxines. He cites the case of the bacillus tuberculosis and also of certain staphylococci, streptococci, &c., of the secondary purulent infection so common in phthisis. Bouchard obtained from tuberculin a substance to which he gave the name ectasine, which had the property of producing dilatation of the vessels. Toxines with similar powers have been obtained from the product of the bacillus pyocyaneus by Charrin and Gley, and from those of the staphylococcus aureus by Arloing. By acting as vaso-dilators these substances would tend to produce tachycardia, since the heart's action becomes more rapid as the peripheral friction diminishes. In other cases the toxines, by giving rise to a neuritis of the vagus, may cause it. Vierordt in a case of phthisis found such a neuritis as was evidenced by a great number of vagus fibres having undergone degeneration and atrophy. With regard to the local sweating, it is probably due to paresis caused by the toxines acting on the sudoriparous and vaso-motor centres of the bulb. Similar action is seen in influenza (Semmola[19]). It has been found by Hunter[20] that in all probability pernicious anæmia is caused by the presence of bacterial poisons, just as it has been found to occur from the presence of cadaveric poisons and analogous ferments. Such being the case, it requires little imagination to conceive that a similar process may occur in rheumatoid arthritis. These bacterial poisons would seem to act by a hæmolytic process which is specially limited in its actions to the portal blood.

[14] Brit. Med. Jour., 1893.
[15] Il Policlinico, December, 1894.
[16] Loc. cit. [17] Loc. cit.
[18] Revue de Médecine, January, 1894.

DR. BLAXALL'S BACTERIOLOGICAL REPORT.

(From the Laboratories of the British Institute of Preventive Medicine.)

This investigation was undertaken at the request of Dr. Bannatyne of Bath, who stated that he with Dr. Wohlmann had arrived at the conclusion from the clinical aspect of cases suffering from rheumatoid arthritis that the disease was due to a micro-organism; and, further, that by microscopic examination of the synovial fluid from affected joints they had found an organism constant and distinct. This micro-organism they considered to be specific. Synovial fluid from affected joints was sent me from Bath. The fluid was aspirated with antiseptic and aseptic precautions, with such success that out of eighteen cases which have been submitted to me, only twice have I found it contaminated. My first attempts to stain organisms in the synovia and to obtain cultivations from it resulted in failure. I adopted the ordinary methods of bacteriological procedure, staining films of the synovial fluid for a few minutes with aniline dyes and inoculating serum tubes and all ordinary culture media, as well as making plate cultivations of nutrient agar-agar and gelatin, after Koch's method. But I was unable to observe any organisms in the microscopic specimens or to recognise any appearance of growth upon any of the culture media. I then varied the staining methods, leaving the specimens in the dyes for a prolonged time in the cold, applying heat, and using concentrated solutions. By these means organisms could be perceived in the specimens corresponding exactly to those described by Dr. Bannatyne and Dr. Wohlmann, and morphologically identical with those seen in their microscopic specimens. But their recognition was unsatisfactory owing to several causes. In the first place, it was evident that the organisms took up the stains with great difficulty and only by their prolonged action or by the application of heat, but these means resulted in a very dense colouration of the synovial film; secondly, they were decolourised with great ease, for attempts to decolourise the substratum left the organisms unstained. Again, the microbe being very minute, it was exceedingly difficult in heavily stained specimens to discriminate it from débris or from precipitate of the dye used. It was necessary then to find a method by which the organisms should be well stained, should retain the stain and yet allow the synovial film to be sufficiently decolourised, and one that should obviate all precipitation of the dye. I cannot claim to have attained this result, but after many trials I have adopted the following procedure as being most satisfactory. A thin film of synovial fluid drawn out between two cover-glasses is dried over the flame and fixed in the usual way by passing through the flame five or six times, as otherwise the organisms are apt to be washed out. The cover-glass is then immersed in dilute acetic acid for about two minutes, well washed with water and dried again, this second drying being to prevent the cover-glass sinking in the staining fluid. The stain which I have found most useful is aniline methylene blue. The cover-glass is placed specimen-side down on a watch-glassful of the stain and the whole placed in a moist chamber in the dark for from three to five days. It is then washed in gently running water for some hours, rinsed in distilled water, dried, and mounted in the usual way. More expeditious, though not giving such clear and well-defined specimens, are aniline gentian violet and carbolic fuchsine. This latter stain I have found it advantageous to dilute one-third with distilled water. From twelve to thirty-six hours is sufficient for these in a moist chamber. The cover-glasses are washed in running water in

[19] Trans. of the Académie de Médecine, 1891-92.
[20] Practitioner, 1890 and 1889, and Brit. Med. Jour., vol. ii., 1892.

the same way, then well rinsed with 30 per cent. alcohol, washed in distilled water, dried, and mounted. The acetic acid clears the synovial film, and allows the dye to penetrate more readily, the prolonged staining deeply colours the organisms, so that the washing process leaves them well stained, though the film is decolourised, and the moist chamber, by preventing evaporation of the dye, obviates the precipitate. Microscopic examination of the specimens reveals an organism possessing peculiar characteristics. At first sight it appears to be a diplococcus, the two cocci being distinctly stained, but separated by a clear unstained interval about equal in length to the diameter of either stained end. This interval I have never succeeded in staining. But careful observation will show, especially where the substratum is faintly coloured, that the intervening portion is nearly as broad as the diameter of either stained extremity, and that it has parallel contours. I therefore consider the organism to be a bacillus which exhibits very marked polar staining. The average length is 2 μ and the average breadth 0·6 μ, but this latter measurement varies greatly with the intensity of the staining. But the organism, as seen under the microscope, appears much smaller than these measurements would indicate, owing to the limited portions stained. The number of organisms met with in a cover-glass specimen of synovial fluid from a joint affected with rheumatoid arthritis varies greatly. Sometimes the field is crowded with them; at other times they are scattered and hard to find. These differences appear to follow very closely the acuteness or chronicity of the disease. The organisms are generally evenly distributed through the film, showing, however, a tendency to congregate around leucocytes. Their arrangement is always discrete. I have never seen chains or masses formed.

Though the staining methods mentioned above have given me the most satisfactory specimens, yet the organisms can be seen when stained for a much shorter time, especially with gentian violet, methyl violet, or carbolic fuchsine. But it is found that these stains if allowed to evaporate deposit upon the cover-glass a precipitate of dye which so closely resembles the organism that it is by no means easy to recognise them when but few are present in a preparation so obscured. For this reason I have quite discarded heating the stains, because after such a brief staining attempts to remove the precipitate by washing and the use of reagents bring about more or less completely the decolourisation of the organism, whereas after a longer contact with the stain the microbes are coloured more firmly and are less easily decolourised. But there is one exception to this statement in a method which I have devised and found useful. Impressed with the small size of the organism and the minute portion stained, it occurred to me that the protoplasm might take up dyes more readily if it came into contact with them while moist. With this in view I mixed a drop of synovial fluid with a few drops of the stain (aniline methylene blue being best) on a cover-glass and rubbed out with a platinum needle. The cover-glass, with the stain and synovial fluid together, was then dried slowly over a burner and when quite dry fixed by passing several times through the flame, then freely washed with water, dried, and mounted. In this way I obtained very fair results, the greater part of the stain being washed off, leaving the organisms well coloured. For rapid diagnosis this method is very useful. Treated by Gram's method the organism is almost completely decolourised. I have been able also to detect the organisms in the synovial fluid in the hanging-drop specimen, but this is far from easy unless they are present in large numbers. I have now stained and examined the synovial fluid from various joints from eighteen cases affected with rheumatoid arthritis, and in every one have observed the organism which I have described above, but in fluids from distended joints due to other causes, as chronic synovitis, gonorrhœal and tubercular affections, I have entirely failed to find them. (Fig. 1. Synovial fluid, stained gentian violet. × 900.)

Cultivation.—At first all attempts at cultivation, both aerobic and anaerobic, yielded apparently no result; but I imagined that this might be due in part to the small size of the organism—so that if it formed colonies they might be scarcely perceptible, and, judging from the scattered distribution in synovia, that the tendency to a free growth might be small—and in part to a slow development. Keeping these points in view I resolved to try it upon a large scale and in such a manner that any change in the medium might be easily detected. Into litre or half-litre flasks were put 250 c.c. of peptone beef-broth, filtered repeatedly until it presented a perfectly clear and bright appearance. Great care was taken over this to avoid the slightest obscuration. The flasks were sterilised and placed in an incubator kept at blood heat for several days, to prove their sterility and also to be sure that the fluid remained perfectly clear. If these conditions were fulfilled the flasks were carefully opened and a drop or two of synovial fluid from an affected joint allowed to enter. The flasks were then incubated at blood heat. Similar flasks, but *uninoculated*, were also incubated at the same time to serve as controls. I was fortunate enough to attain success with the first experiment. The first point noticed was that for three days the beef-broth remained perfectly clear, pointing strongly to the conclusion that the synovial fluid contained no ordinary organism. But from the fourth day and onward there could be seen floating in the clear fluid very minute particles, and these increasing gave rise to an appearance resembling "gold dust." This effect was enhanced by lightly shaking the flask. Sometimes the growth seems to stop at this "gold dust" stage, but at other times it may become slightly flocculent, recalling to mind the appearance of a commencing growth of tubercle bacilli in glycerine beef-broth. The beef-broth never becomes turbid, but always retains its bright appearance. The control flasks showed no such development. Microscopic examination of such a culture, stained as before, displays the organisms in considerable number; but it can be readily understood, from the delicate nature of the cultures and the imperfections of staining methods, that a too great reliance on stained specimens was not advisable, and that additional evidence would be helpful. Verification was obtained by making hanging-drop specimens, and this is the easiest method of demonstrating the presence of the organism. In the hanging-drop the microbe appears precisely as in the stained specimens, with two bright refractile ends and an intermediate part much less obvious. They may occur in zoogloea masses, or as discreet individuals hugging the edge of the drop. They are non-motile but have a marked oscillatory movement. I have been fortunate enough to see them undergo division in the hanging-drop specimen. The intervening portion lengthens out, the ends appearing to pull against one another energetically, the whole organism oscillating the while uneasily. The middle part lengthens out more and more, so that the organism appears to be almost twice its ordinary length, then suddenly the link snaps and the freed ends fly off in contrary directions and are lost amidst their fellows. This phenomenon helps, I think, to explain some variations in length frequently noticed in stained specimens from cultures. In these, some bacilli will be seen very short, the stained ends quite close together, with a minute unstained connecting link, very suggestive of a diplococcus. These I take to be quite young organisms. Some, however, are much longer, attaining a length of 3μ or possibly 4μ, the stained ends widely separated, and a clear, unstained sheath faintly visible with the highest powers. These I imagine to be the older forms soon about to divide. In these older forms, too, the staining is sometimes somewhat different. Instead of the stained portion being more or less spherical at the ends of the organism the coloured part is in the form of a conical cap, the base towards the centre of the bacillus, and spreading faintly down the edges of the sheath. These forms show best the claim of the organism to be considered a bacillus. It will be obvious, however, that it is very difficult to bring out these subtle differences in a photograph, and, indeed, the limited staining of the organism and its minuteness render the production of good photographs by no means easy. (Figs. 2 and 3. Fig. 2 shows a beef-broth culture, stained fuschin. × 1200.) If beef-broth cultures are inoculated on tubes of sloping nutrient agar-agar and incubated at blood heat, growth takes place in about three days and in a very characteristic manner. This growth is exceedingly delicate. It appears no more than as a fine transparent film, which under a lens can be seen to consist of minute colonies no larger than a pin point and perfectly transparent. To the naked eye it bears a very close resemblance to condensation water, though control tubes and the obvious tests show that this is not the case. It grows also on Löffler's serum, but here the growth is even more difficult to recognise owing perhaps to the opalescence of the medium. It occurs as minute points, least difficult to observe at the lower part of the tube, where the condensation water has washed off the cholesterin. Stained cover-glass specimens and hanging-drop specimens made from such cultures reveal

an organism identical morphologically with that described as present in the beef-broth cultures and synovial fluid. I have also grown the organism in milk, where it appears to flourish, but without causing curdling or precipitation of the casein. On nutrient gelatin, however, at 22° C. I have never succeeded in getting a growth, and in liquid gelatin, incubated at 37° C., there is no visible growth. Examination of the blood in cases affected with rheumatoid arthritis has also afforded me positive results of the presence of the organism. I have examined the blood taken near to an affected joint and also that from a distance, and in both have been able to detect the organism in microscopic specimens. Out of five specimens of blood submitted to me I have been successful in three, and these were the most severe cases. But further proof of the presence of the organism in the blood is the fact that twice I have been able to obtain cultures from it. The method was the same as previously described. The blood was inoculated into flasks of clear sterilised beef-broth and incubated at blood-heat temperature. Sub-cultures were also made from these flasks on to agar-agar and blood serum. The organism found was identical in every respect with that which grew from the synovial fluid and with that which was observed in the stained specimens. Some animal experiments have been made for which I am indebted to the Council of the Royal College of Surgeons of England and to Dr. G. Sims Woodhead. Two cubic centimetres of a beef-broth culture were injected subcutaneously into mice, guinea-pigs, and rabbits, but without a fatal result. There is some reason to think, however, that the cultures set up a disease in rabbits which affected the joints, but further experiments are necessary to arrive at the truth with regard to this matter.

As far as I am aware, only one organism has been previously associated with rheumatoid arthritis which it is necessary to discuss. This was described by Schüller.[21] He writes of a bacillus 2·6 μ long and 0·75–0·995 μ broad which exhibits polar staining. It is easily coloured by ordinary stains, especially carbolic fuchsin, but very easily decolourised. It is noteworthy that Schüller thinks it incumbent on him to point out the distinction between his organism and tubercle bacilli. It grows readily upon gelatin at 25° C. In 2–3–6 days small white grains or knobs appear. The gelatin is liquefied, and eventually the organism grows to such an extent that the whole mass becomes an opaque white. On agar-agar it grows as greyish-white flecks or films. It is obvious that the organism described by Schüller differs markedly from the one under discussion; in fact, the only points of resemblance are the polar staining and the easy decolourisation. It therefore appears to me to be indisputable that the organism of Schüller is not that which was discovered by Dr. Bannatyne and Dr. Wohlmann.

To sum up. 1. In the synovial fluid of eighteen cases of rheumatoid arthritis an organism has been demonstrated which is constant in its characteristics. 2. The organism is a minute bacillus exhibiting marked polar staining. It is difficult to stain and easily decolourised. 3. The organism can be grown in culture media and presents striking characteristics. In beef broth it gives the appearance of gold dust and on agar-agar and serum its growth is almost invisible. It does not grow on nutrient gelatin at ordinary temperature. 4. It is present in the blood in severe cases. 5. It has not been found in the synovial fluid from distended joints due to other causes. It should be added that it has been impossible to examine sections of the synovial membrane owing to the want of pathological specimens. In conclusion, I should like to record my thanks to Mr. Barnard for the care and skill he has expended on the photographs.

[21] Max Schüller: Untersuchungen über die Aetiologie der sogen chronisch Rheumatischen Gelenkentzündungen (Berliner Klinische Wochenschrift, Sept. 4th, 1893).

MEDICO-PSYCHOLOGICAL ASSOCIATION.—The spring meeting of the South-Western Division was held at Bailbrook House, Bath, on the 14th inst., the President being in the chair. There was a large attendance of members and several important resolutions were passed. The report of the Committee on Criminal Responsibility was ordered to lie on the table. The discussion on the "nursing staff" was taken part in by several members. Dr. Stewart contributed a useful note on Section 38 of the Lunacy Act, 1890. The members afterwards dined together at the Grand Pump Room Hotel.

COLOUR VISION.[1]

BY W. G. LAWS, M.B. EDIN., F.R.C.S. ENG.,
SURGEON TO THE NOTTINGHAM AND MIDLAND EYE INFIRMARY.

THE speaker pointed out that the subject lay in the debatable region between mental states and physical processes, where so many interesting problems remained unsolved. The eye was the end organ which brought us into direct relation with the ether, that ultimate form of matter as to which it became possible to doubt whether it was material at all, and which probably entered closely into the processes of thought itself. Before speaking of the theories of colour vision it might be asked what was there in colour vision that so many scientific minds had felt required explanation. It would be noticed that every theory contained the same fundamental idea that there must be a certain number of colours, varying with different observers, but always few, which were to be regarded as pure or simple colours, all others being considered as compounds or mixtures of these. On looking at the perfectly continuous series of colours which we see in the spectrum there seemed to be no obvious physical reason for this distinction. It was, indeed, a psychological rather than a physical one. We had an innate disinclination to conceive of an infinite number of different causes for the infinite number of different sensations of which we were conscious; it was a principle deeply rooted in our reason, expressed long ago by William of Occam, whose famous Razor, "*Entia non sunt multiplicanda*," was employed by us nowadays as constantly in the solution of physical problems as it was by the Invincible Doctor in the division of the sophistries of Rationalism. Mr. Laws hoped to show, however, in relation to one at least of the theories that it was possible to cut too close with it. Many theories of colour vision had been proposed during the last 200 years, some of them interesting and original, but two only had gained any general acceptance and to these the discussion would be confined. He then described the theory of Young as it was published in 1801, its modification by Helmholtz more than half a century later, with his proof of the mathematical possibility of reducing all our colour sensations to three. Hering's theory was next described, mainly in extracts from his original papers, Mr. Laws considering that none of the published accounts of it in this country did justice to the simple conception, the logical development, and lucid expression of the theory as stated by Hering himself. What we might fairly demand of a theory of colour vision was that it should give a reasonable explanation of our everyday experience with regard to our sensations, and also should furnish us with a trustworthy guide when the conditions were modified by pathological processes. As it was impossible for him to discuss all the phenomena in the light of these theories he would make the appeal only to an experiment made for us by nature, namely, the condition of congenital colour-blindness. Of this Mr. Laws considered that practically only one type existed, admirably described in Dr. Pole's account of his own case; that other types had been described was due to the attempt to make the facts of observation fit with an erroneous theory; the rare cases of monocular colour-blindness were quoted as highly conclusive on this point; finally, the verification was at the hand of each one in the colour-blind zone of his own retina. He summed up the evidence from colour-blindness as showing that whenever there is a diminution of the number of our colour-perceptions it is not *one* that disappears, but always a *pair* of complementary colours. Here was the reason that the trichromic theory of Young failed—it was not in harmony with the essentially paired character of our colour sensations. Further examples of this character were given in the phenomena of successive and simultaneous contrast, and it was pointed out that we have only to look at a colour in order to call up the sensation of another as definite and (under proper conditions) as brilliant as the former, and having the constant psychical character that it is the greatest possible contrast to the former that our minds can conceive. The physical relationship of the two was such that if the spectrum be divided into two halves, and the more refrangible be superposed on the less refrangible half, then colour by colour and shade by shade the one will neutralise the other and a colourless band result. The

[1] Abstract of a paper read before the Nottingham Medico-Chirurgical Society on April 15th, 1896.

dividing line between the two halves corresponds to the neutral point of the spectrum of the colour-blind, and thus the same relation holds for their spectrum as for ours. This very remarkable relationship had, he thought, had less importance attached to it than it deserved. The three pairs of antagonistic chemical processes of Hering seemed to him but crudely to account for the facts. Might there not be a deeper cause for it? Much light had been thrown of late years on the relations of light and electricity, originally by Clerk Maxwell's mathematical development of the relations of certain physical constants into an electromagnetic theory of light, and, perhaps more strikingly, by Hertz's demonstration of the possibility of producing electromagnetic waves which had all the essential characters of those of light. We know as little of the real nature of electricity as of that of the ether; perhaps, indeed, they were one and the same thing; but one of the most characteristic properties of the former was its power of producing a condition of polarity, or the separation of equal and opposite energies, in matter under its influence. Might not this furnish a clue to the intimate nature of the action of light on the retina and so lead to a completer theory of colour vision than we yet possess?

LITHOTRITY IN CASES OF STONE: SIMPLE AND COMPLICATED.

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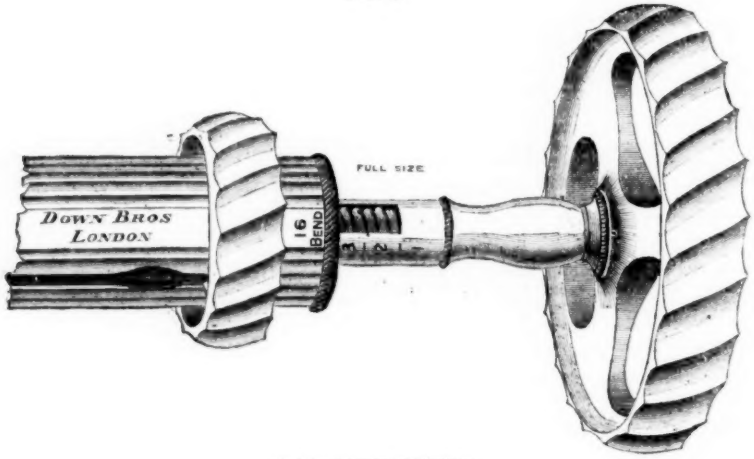
(Continued from page 1056.)

THE result of Bigelow's operation for large stones has been excellent, fifteen cases over two ounces without a death, but at the same time it must be admitted that the execution of such operations is not facile. First as to the instruments required. The lithotrite to deal with large stones must be very powerful and at the same time such that the power can be discriminately and delicately applied. It must also be so constructed as to cause the least possible toil to the operator—a matter of great consideration in an operation lasting between one and two hours. I have always employed a modified Thompson's lithotrite. The modifications have been carried out for me by Messrs. Down Brothers, who have kindly expended great time and trouble in the work. They have produced for me instruments of the most excellent make and finish. I have seen and used lithotrites by many makers, English, American, German, French, and Italian, but have never come across any to compare with the ones they have lately made for me. The instruments I use for large stones are two. The first has a gape of two and a half inches; it measures fourteen English in the shaft and fifteen and a half at the shoulder. It is fully fenestrated and has a comparatively short beak. It has two modifications in the handle (Fig. 6). The wheel is much larger than usual; its diameter is two and a half inches and is made of aluminium for lightness. This increased size of the wheel adds very considerably to the pressure which can be exerted on the stone and also greatly increases the delicacy with which the pressure can be applied. The button which is generally employed to bring the screw action into play is replaced by a ring surrounding the handle. This ring runs very easily and it can be pressed on by the forefinger or thumb without altering the grasp on the handle, which is made a little longer than usual. I have never yet met the stone which this instrument has not been powerful enough to crush and I doubt very much whether such stones ever occur. I have had stones, however, too large to be seized in its grasp. I have therefore had made another lithotrite exactly similar in construction except that its gape (Fig. 7) is five inches—a gape sufficient for any stone ever yet met with. It was with this instrument that I crushed the stone of twelve ounces.

The evacuating tubes for operations on large stones should be straight and as large as possible. Egyptian patients have, I think, exceptionally large urethras, and I have frequently been able to introduce a No. 22 English, and I usually work with a No. 18 or 20. Of course, no force must be used in introducing a tube, but the largest should be used that can be introduced without violence. Secondly, as to the operator. There is no question that in order to crush a large stone well the operator must be in thorough condition and in constant practice, or, to use a sporting term, be in "training." During the first twenty minutes of a long crushing most men can maintain the necessary delicacy of manipulation combined with the exercise of considerable force; but when it comes to working at the same strain for a second, third, fourth, or even fifth, sixth, or seventh period condition begins to tell. The force required to be exerted is often the full power of a strong wrist and arm even when using the powerful instruments I have described, and this force has to be exerted with great discrimination and great patience. Nothing, I think, can be sounder than the advice given by most experienced lithotritists to beginners not to crush big stones. I would, however, modify this advice to beginners thus: not to crush big stones except through a perineal incision. Given powerful instruments and an experienced operator the difficulties likely to be met with in crushing big stones are two. The first difficulty is in the seizure of the stone. This difficulty may arise from one of two causes—the size of the stone or the contraction on it of the bladder wall; very frequently the two are co-existent. With ordinary lithotrites the mere size of the stone may render it impossible to bring the screw power into action. Reference has been made in THE LANCET to a lithotrite built for an Indian surgeon to cope with such enormous stones. He had found on one occasion when grasping a

FIG. 6.

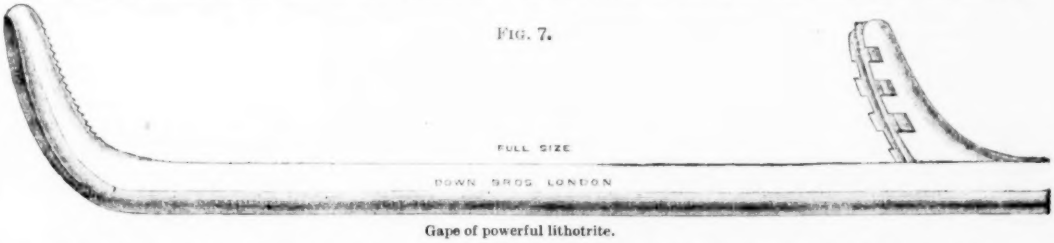


Handle of powerful lithotrite.

large stone that the whole of the male screw projected beyond the handle of the lithotrite and that in consequence the screw action was completely out of gear. His remedy, devised on the spur of the moment, was excellent and was as forcible in execution as it was ancient in conception. He hammered the projecting extremity of the male blade until, after suffering considerable damage, it returned within the limits of the screw action. To meet an emergency the remedy was excellent, and to judge from the description the operator exhibited a perseverance which fell but little short of that of the French surgeon who early in this century only abandoned the attempt to fracture a stone by the same method after delivering a thousand blows. To construct a new instrument, however, to carry out this treatment was but to return to the percuteur of Baron Heurteloup, which was entirely superseded half a century ago by Weiss's screw action. The new instrument apparently embodies a percuteur as an addition to the screw action; it would seem to be much simpler to extend the screw, as has been done in my larger lithotrite, to the required dimensions. With this instrument any stone can be seized. The largest stone in my collection, weighing 34½ oz., comes easily within its grasp. It is hardly likely to come in contact with a larger one. The other cause of difficulty in seizing a large stone, the contraction on it of the bladder walls, is much more important. In my earlier operations I have on various occasions abandoned a lithotrity on this account. I have found that large stones are very frequently accompanied by extreme irritability of the bladder and partly from this cause and partly from the stone in some cases being large enough to occupy the whole bladder cavity the muscular walls are so contracted on it as to offer a very great resistance to the insinuation of the blades of the lithotrite. The force required for this insinuation is often such as to raise great apprehension in the mind of the operator as to the possible effects on the walls of the bladder. The danger of any serious injury is, however, in reality very slight, the bladder walls being often much thickened, and being in all cases very resistant to, and probably proof against, all steady movements of a blunt instrument within anything like reasonable limits. In such cases the distension of the bladder with fluid may be a great assistance, though it is often difficult of execution and, unless properly carried out, not devoid of danger.

Bladders have been ruptured by forcible injections during lithotrity and such cases have been recorded. In the overcoming of bladder resistance, however, time as well as force is an important element, and a long-continued slight pressure is as effectual as it is free from danger. In cases where there is considerable resistance and where distension is necessary I attach great importance to the use of continuous hydrostatic pressure. I pass into the bladder the largest size evacuating catheter that will easily enter, and after emptying and washing out the bladder I insert into the catheter the nozzle of an indiarubber tube one metre in length, terminating in a glass recipient, graduated in grammes and holding 1 kilo of boracic acid solution. The bore of the nozzle is 1 millimetre in diameter, so that the current can only enter the bladder very slowly, and every precaution is used to prevent the introduction of any large quantity of air. The recipient is now elevated 50 or 75 centimetres (20 to 30 inches) above the bladder level. In most cases 50 grammes or so of fluid enter the bladder at once, and the flow then either ceases or owing to the rejection by the bladder of the fluid introduced the level in the recipient rises again. Usually after a minute or two, and after various oscillations of level, 200 or 300 grammes of fluid, equal to about 8 to 12 ounces, enter the bladder. For an ordinary large stone this quantity is sufficient, but where dealing with a very large one I prefer to introduce, if possible, from 400 to 500 grammes. If necessary I maintain the pressure of 75 centimetres for five minutes, and then if the resistance is not yet overcome I raise the recipient one metre above the bladder level. This is nearly always sufficient after from three to five minutes, but in some rare cases I have had to increase the pressure to one metre and a quarter, which I consider, when all due precautions are taken, to be within the limits of safety, and at this level I have never met with failure. The presence of this considerable quantity of water in the bladder renders the seizure of the stone not only possible but with ordinary skill and patience easy. It must be remembered, also, that a stone has a smallest as well as a largest diameter. It often happens that a stone which when first seized is too big for the gape of the instrument may when grasped at another point come easily within the range of the screw action. It has been proposed by some operators to deal with such stones by gradually picking off fragments with the lithotrite until the mass is sufficiently diminished to allow of its being seized. This process is, however, of necessity slow, and I prefer to use an instrument with a sufficiently large gape. The second difficulty arises in the crushing. The resistance of the stone to the action of the instrument may be very great. It is due much more to the hardness of the stone than to its size, very large stones being frequently phosphatic in nature, soft, and friable. The most difficult stones to crack that I have come across have been between two or three ounces in weight. The oxalate of lime stone is, I think, the hardest of all, but I have met with stones composed chiefly of urates with a slight admixture of phosphates, which have been almost if not quite as resistant. For such stones the lithotrite must be strong and heavy and absolutely trustworthy, but with an instrument such as I use and have described above every stone may be crushed. They are not, however, to be crushed by simple force. The amount of pressure exerted by the jaws of the lithotrite is, of course, the principal factor, but, as in the dilatation of the bladder so here also, time has a very important influence. The experienced operator generally knows when he has before him a really hard stone. It has probably existed for some time and has grown very slowly. The urine is generally acid and contains little or no mucus or pus; there is, in fact, no considerable cystitis. The sound gives out a ringing note and the stone usually moves freely about in the bladder. In the presence of such a case let him choose his strongest lithotrite. Having seized his stone, which is often a matter of difficulty, as many very hard stones are round and smooth, he will probably find that the male blade is sharply arrested with something like two inches of screw projecting from the handle. Directly he applies the screw force he will experience an abrupt resistance which all the strain he can or dare apply is unable to overcome. Let him wait half a minute and then put on an extra half or quarter turn; if necessary let him repeat this wait and this extra pressure two or even three times, and the reward of his patience will almost certainly be the same as has always happened to myself. During one of these periods of waiting a sharp explosive crack will be heard and the difficulty of the case be over. A third difficulty in crushing a large stone arises from the amount of débris. I am convinced that in dealing with small stones the method adopted by Guyon is most excellent. He generally submits the stone to a very prolonged crushing before removing the lithotrite, occupying as much as twenty minutes in reducing the stone to the smallest possible fragments, and in many cases he continues the crushing until he has satisfied himself that all the fragments are small enough to pass through the evacuator. In this way the operation is completed with one or at most two introductions each of the lithotrite and of the evacuator,

FIG. 7.



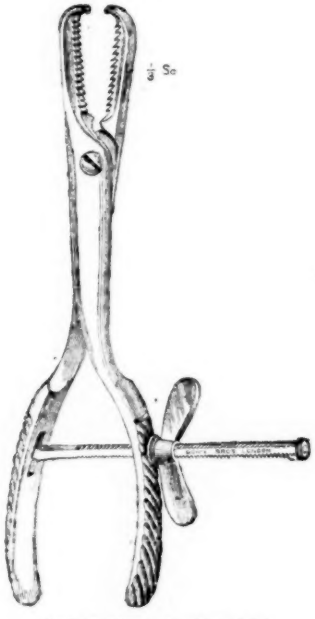
Gape of powerful lithotrite.

and much bruising and injury is spared to the urethra and prostate. In dealing with large stones I consider, however, that it is better to evacuate fragments frequently, and in such cases I stop crushing so soon as I feel my lithotrite impeded by the collection of many fragments and evacuate. In the early part of a prolonged operation I may remove my lithotrite after fifteen or sixteen crushes and evacuate, and I generally find that the procedure is thereby greatly facilitated. In removing, for instance, the twelve-ounce stone I must have introduced the evacuator at least six times before removing two ounces of débris; on the other hand, five or six evacuations sufficed to remove the other ten. I would give, then, a general rule as follows. When dealing with small stones endeavour to complete the fragmentation without removing the lithotrite, but in the case of large stones evacuate as soon as there is so much débris as to interfere with the free use of the lithotrite.

It will be gathered from the above remarks with regard to the suitability of Bigelow's operation as a treatment for large stones, that although the results obtainable may be excellent considerable practice is necessary before such results can be obtained. For the surgeon who only occasionally meets with stone cases I consider that there are other methods of operation more likely to meet with success, and of these other methods I should certainly give preference to that to which I have referred under the name of perineal lithotrity. There are various methods of performing this operation, but they all may be classified under three heads: (1) an incision is made into the urethra from the perineum and a strong lithotrite passed from this incision through the remainder of the urethra into the bladder; (2) an incision is made into the urethra from the perineum, the remainder of the urethra is stretched by some dilating instrument, and passage into the bladder thus given to a large stone crusher; and (3) an incision is made from the perineum into the bladder as in any one of the various classical operations for perineal lithotomy, and through this wound a stone crusher is introduced into the bladder. The first method has been recently practised and advocated by Keith.[1] He gives an excellent description of the operation and refers to very good results. I fail to see, however, what is gained by the procedure. The method is just as difficult as urethral lithotrity, if not more so, and it in no way increases the scope of the latter operation, which has been shown to be capable of removing stones much larger than any removed by Keith. I would limit its application to cases in which it is impossible to pass the lithotrite down the penile portion of the urethra. The second method was strongly advocated by Dolbeau, but in his hands and in those of other surgeons the results yielded have not been favourable. The method is very fully described in the French Medical Encyclopædias. The third method is the one I have chiefly practised myself and which I consider to be the best operation for large stones in the hands of the general surgeon. The method is referred to in most textbooks on surgery and is most generally condemned. As therein described, the perineal incision has been single, double, or multiple. Many forms of crushing instruments have been devised and unfortunately used. They have generally been most ingenious and more cumbersome. I have myself employed but one form for this operation, making a left lateral incision into the bladder and using a simple straight strong pair of forceps as a crusher (Fig. 8).

I will describe one of my operations, which will serve as a type for them all. The patient was an Egyptian fellah, male, aged fifty-four years, suffering from a large vesical calculus. The bladder was washed out with boracic acid solution and a laterally grooved staff introduced. The usual incision for lateral lithotomy was made into the bladder, the skin being freely divided, the prostate and neck of the bladder but slightly. The forefinger of the left hand was then inserted into the wound as the knife was withdrawn, and guided by the staff was insinuated in the bladder, dilating the wound in its progress. This method is in opposition to the directions usually given in text-books; I have, however, uniformly adopted it in all lateral lithotomies, of which, as shown in Table I.,[2] I have performed twenty-eight without a single death. My reasons for advocating this method are: (1) the diminution of the risk of hæmorrhage; (2) the exact limit thereby given to the wound in the neck of the bladder; and (3) the facility of the procedure. It must be observed, however, that all forefingers are not suitable for this purpose and that it is more difficult of execution and less advisable in the case of small children. Care must also be taken to insinuate the finger and not to use any violence to the neck of the bladder. In perineal lithotrity I have found this method particularly useful, as my crushing forceps coincide in diameter with my forefinger, and where the latter has been introduced they can easily follow. Having passed my finger fully into the bladder the staff was first withdrawn and then my finger. A careful examination of the incision having shown that there was no considerable hæmorrhage the crushing forceps, carefully oiled, were introduced through the wound on to the stone. Each handle of the forceps being held in one hand, the jaws were carefully opened, and, at the same time, their extremities were kept in careful apposition to the stone. There was, as is usually the case, some resistance to the opening of the forceps due to the stone being driven down to the neck of the bladder by muscular contraction. Graduated pressure on the forceps was sufficient to push the stone upwards and to thus free the jaws of the forceps from the constriction. The jaws, still in apposition with the stone, were then cautiously and easily opened until a large portion of the circumference of the stone was included in their grasp. The stone thus held was moved about in all directions and twisted through a quarter circle to ensure that no bladder wall was included. With ordinary care such an accident is almost impossible, and the difference in sensation as conducted by the forceps gives immediate and easily recognisable evidence should it occur. An endeavour was then made to crush the stone with the hand power only; but as this failed the screw action was applied with immediate success, the stone breaking with an audible report. One or two slight movements of the forceps sufficed to free the jaws of the crusher from fragments. The bladder was then carefully sounded with the closed forceps and a large fragment fixed upon. The forceps were again opened in the same cautious manner as before and this fragment crushed. This manœuvre was repeated three or four times until the amount of débris was such as to impede the crusher. This was then removed from the bladder, great care being taken to free its jaws from all fragments which might injure the wound during its extraction. These fragments might be detached either by movements of the forceps or with a thick

FIG. 8.



Lithoclast for perineal lithotrity.

[1] Indian Medical Record, Calcutta, 1891, p. 521; also THE LANCET, June 4th and 11th, 1892.

[2] THE LANCET April 18th, 1896.

blunt probe. The crusher being removed, the finger, carefully oiled, was introduced into the bladder, partly in order to recognise the existence of fragments small enough and partly to place them in the most favourable position for extraction. A very small pair of lithotomy forceps was then introduced into the bladder and fragment after fragment removed. Great care was taken to attempt the removal of no fragments so large as to be difficult of passage. A repetition of these manœuvres of crushing and removal was sufficient to eventually entirely evacuate from the bladder a stone weighing 102 grammes or nearly 4 ounces. The bladder was then carefully washed out with a strong stream of water through the largest sized evacuating catheter. The whole of its walls were thoroughly explored by the finger and every fragment of stone removed. The operation lasted nearly thirty-five minutes. The patient left the hospital completely cured three weeks later. I have performed this operation on twenty occasions for large stones; of these, five weighed between 2 and 3 ounces, seven between 3 and 4 ounces, four between 4 and 6 ounces, and four between 6 and 8 ounces. Every one of these twenty operations was successful. The operation, therefore, has given me the most successful results. I consider it to be much easier of execution in such cases than ordinary lithotrity and to be much safer than suprapubic or other form of lithotomy. I would recommend it to the general operator as the best method of coping with large stones. The reproach has been made to this operation that it is likely to be followed by a perineal fistula. In my own practice this has so far not occurred, and if great care be taken to remove all fragments there is but little chance of its occurrence. I would at the same time recommend great attention to the following points:—(1) The crusher should be a simple, powerful straight forceps, a little less in diameter when closed than the operator's forefinger, and should have a simple screw attachment; (2) the wound into the bladder should be only of such size as to admit the forefinger; (3) everything introduced into the bladder should be freely lubricated; (4) the extremities of the jaws of the forceps should be kept touching the fragment about to be seized, and every care taken to avoid seizure of the mucous membrane; (5) the greatest gentleness should be exercised in all movements; (6) no fragments should be removed by means of the crusher; (7) no attempt should be made to remove any fragments except such as can pass with complete ease; (8) the forefinger should be continually used to explore the condition of the bladder and the position of the fragments; (9) the greatest care should be taken to leave no fragments behind; and (10) complete cleanliness is absolutely essential.

I formulate the above axioms only after great consideration, inasmuch as they differ somewhat from the teaching of Reginald Harrison, who has done more than anyone to establish perineal lithotrity. He first brought his method before the profession in 1888, and up to May, 1895, had performed 150 operations all successfully.[3] He prefers to make an incision into the urethra only, and to introduce through this opening a crushing forceps into the bladder, the crusher having about the diameter of a forefinger. My experience has been that a forefinger cannot be introduced without laceration of the tissues about the neck of the bladder, and I prefer to determine the direction of this laceration downwards and outwards by a small incision rather than to leave it to chance. He utilises also the crusher to remove fragments, supplementing this instrument by washing out the bladder with an evacuating syringe. For myself I am convinced that the removal of fragments by an instrument which when closed equals in size the original opening cannot but be attended with laceration or bruising of that opening, and I think greater safety is obtained by using the crusher for crushing only and by removing fragments with a fine pair of forceps or with a spoon. I consider also that the difficulty which certainly exists in this operation of entirely removing every fragment necessitates a thorough digital exploration of the bladder. This cannot, I think, be effectually done through an incision into the urethra only. In principle, however, the operation recommended by Harrison in 1888 is identical with that which I have, following his indications, found so useful. His results also have been more favourable than mine, he having performed fifteen cases without a death, whereas I out of twenty-seven have lost one. With regard, therefore, to the treatment of the first complication of cases of stone, I am of opinion that the results obtainable by lithotrity are better than those which have been obtained by any other form of operation on stones exceptional for their size and hardness. I consider that practically every bladder stone uncomplicated, except with regard to its size and its hardness, can be removed by one of the two forms of lithotrity above described. The proportion of such cases suitable for the one operation or the other will depend on the experience of the operator. Bigelow's operation I consider to be the more brilliant, perineal lithotrity the more generally useful. The indication for the latter operation increases with the size of the stone and diminishes with the experience of the operator.

The next complications to which I have to refer are those arising from the position of the stone. Leaving out of consideration stones entirely outside the bladder cavity, the abnormal positions that I have had to deal with are four: (1) the stone has been partly in the bladder and partly in the ureter; (2) the stone has been lodged entirely or partly in a diverticulum of the bladder; (3) the stone has been lodged in a deep pouch behind the prostate; and (4) the stone has been partly in the bladder and partly in the urethra.

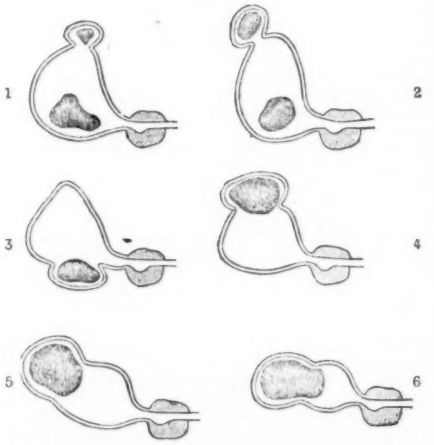
1. *Where the stone has been partly in the bladder and partly in the ureter.*—I have met with and diagnosed during operation three cases of this somewhat rare condition. In all of them there was in addition a stone entirely in the bladder cavity, and it was only on the removal of the bladder stone that the one impacted in the ureter was detected. Quite lately I have met with a case in which the only stone present was impacted at the opening of the right ureter. This case was diagnosed before operation, and supra-pubic cystotomy was performed for the removal of the stone. The first case I met with is worth recording. The patient was a healthy Egyptian fellah aged about fifty years. A largish stone had been diagnosed and I performed lithotrity. After removing some 60 grammes of débris, and after the evacuator had long ceased to remove any fragments, I could still feel and hear a stone on sounding. Repeated attempts to seize this with the lithotrite failed entirely. The stone, as felt by the sound, always occupied the same position on the right side of the base of the bladder. My suspicions being aroused I examined per rectum and felt a distinct, immovable, hard mass which I could balance between my finger and the sound. The position corresponded exactly to the point of entry of the right ureter into the bladder and the diagnosis was thus established. After much consideration I decided to attempt its removal and proceeded to open the bladder by a perineal incision. A supra-pubic opening would probably have been wiser, but the stone as felt per rectum seemed quite close at hand to the perineum. A finger introduced into the bladder easily recognised the stone, which after some difficulty I managed to seize with a lithotomy forceps. All traction, however, failed to move it. I proceeded to incise the opening of the ureter into the bladder, passing a long knife with a rounded cutting extremity along my forefinger on to the stone. After much difficulty I sufficiently liberated the stone to allow of its removal. The stone was an inch and two lines in length and nearly two inches in circumference. There was a very marked neck or construction corresponding to the orifice of the ureter; the part beyond this, about a sixth of the whole stone, had projected into the bladder; the other five-sixths had been retained in the ureter. The result of this operation was unsatisfactory, the patient dying some twenty days after the operation. Post mortem there were found very marked old kidney degenerations and a sub-peritoneal abscess around the right ureteral opening. This case is mentioned in the tables under the heading "Other." In my second case the diagnosis was made in exactly the same way as in the one above described. I decided, however, that if I could not seize the stone with my lithotrite I would let it be. After many fruitless essays I at last grasped it by pushing the stone up to the lithotrite with a finger introduced into the rectum. The stone remained at first immovable from its position, and during an extra strong effort the grasp of the lithotrite slipped. I was able, however, to grasp the stone again and after several trials succeeded in drawing it out of the ureter. Its subsequent crushing presented no difficulty and the case recovered perfectly. In my third case the diagnosis, treatment, and result were the same as in No. 2. In this case,

[3] Vide reprint of a lecture on Some Points in the Practice of Lithotrity and Litholapaxy, John Bale and Sons, London, 1895.

however, I kept the débris of the two stones quite separate. The bladder stone weighed 19 grammes and consisted of urates and oxalates; the ureter stone weighed 3 grammes and consisted of oxalates, urates, and carbonates. This condition is more common than is usually recognised, many cases having perhaps been diagnosed as stone in a diverticulum of the bladder. A most interesting case is recorded by E. H. Fenwick[4] of a double stone, one part of which is described as being in the bladder and the other in a diverticulum outside the base and back of the bladder. The very difficult operation for its removal was successful, and no more exact determination was therefore possible, but the condition so closely resembles that of my first case, in which the diagnosis was unfortunately confirmed by a necropsy, that I strongly suspect that in Fenwick's case also the stone was lodged in the dilated ureter. The same remark applies to a case reported by McArdle,[5] to one reported by T. V. Jackson to the Pathological Society of London, and to one at least of the cases described by Bruce Clarke in his paper on Latent Calculi.[6] Thomas Smith records a case.[7] Buckston Browne records a probable and Pitts a certain case in the Transactions of the Clinical Society of London, 1890, p. 89. At the same meeting Freyer described a stone partly in the bladder and partly in the ureter which was successfully removed at the second operation. Buckston Browne refers to another case in the Transactions of the Clinical Society of London, 1889, p. 36. The above records show that the condition is sufficiently frequent to be of a real importance, and I consider that in all operations for bladder stone the orifices of the two ureters should be carefully examined. Further, I think it of special importance to thoroughly examine this region in cases in which stone has been suspected and not found. The examination, to be effectual, must be bimanual. The forefinger of the left hand should be introduced into the rectum and should thoroughly explore the base of the bladder. The same region should at the same time be explored by a sound introduced into the bladder per urethram. Frequently this examination cannot be satisfactorily carried out except under chloroform, but if properly performed the presence of a stone partly in the ureter may be rendered either certain or very probable. Having detected a stone in this condition how should it be treated? In my opinion a through trial should be given to lithotrity. A small, light lithotrite should be used, the position of the protruding part of the stone carefully determined, and an attempt (to be repeated many times if necessary) made to seize it. The stone having been grasped by the lithotrite, half a turn of the screw should be given to tighten the grip and attempts be made to pull the stone into the general bladder cavity. Great assistance, both in seizing and dislodging the stone, may be given by a finger in the rectum. Should it be possible to grasp the stone but not to dislodge it I should not attempt to crush it *in situ*, there being too great a risk of crushing surrounding tissue at the same time. Having given a fair trial to lithotrity, and having failed, I should at once perform supra-pubic cystotomy, enlarge the orifice of the ureter by careful dilatation or by several small incisions, and, if necessary, break up the stone with a small pair of necrosis forceps. The result of my operations for this condition has not been good. I have operated in all four times (once since commencing this paper), with a mortality of 2, or 50 per cent. The two successful cases were lithotrities. In the two fatal cases lithotrity failed, in the one I did lateral and in the other supra-pubic cystotomy.

2. *Where the stone has been lodged in a diverticulum of the bladder.*—I have met with six cases in which I have been able to diagnose the position of the stone in a sac communicating by a large or small opening with the bladder cavity. I have met with two others in which the condition, though certain, had not yet reached an advanced stage, and several cases in which the stone, though not encysted, always occupied a special portion of the general cavity. Of the six cases of complete sacculation (Fig. 9) Nos. 1, 3, and 4 were operated on successfully by urethral lithotrity and Nos. 2, 5, and 6 by perineal lithotrity—two successfully and one, No. 2, with a fatal result. The first case caused me for a time great anxiety. The condition had not been recognised before operation and the stone had been easily seized and crushed. The débris was passing freely through the evacuator, where I noticed a curious gurgling sound, and on inspecting the abdomen perceived that each injection of water into the bladder produced a swelling evidently outside the bladder cavity. I suspected at once that I had during my manipulations perforated the bladder wall. The extravasation of water seemed, however, so limited that I determined to thoroughly explore with a sound before proceeding to cut down on to the perforation. I managed to introduce the sound into the extravasation, and after careful exploration convinced myself, to my intense relief, that I had to deal with a diverticulum of the bladder. I recognised a stone in the diverticulum, but cannot say whether it was originally there or was a fragment which had been washed up. I introduced a small lithotrite into the sac and crushed the stone, the fragments falling into the general bladder cavity. The patient recovered perfectly. The second case is of importance from many points: (1) the almost complete closure of the sac; (2) the erroneous diagnosis; and (3) the fatal result. The patient was an Egyptian fellah aged about eighty-five years, suffering from a stone in the bladder with very fœtid cystitis, and his general condition was unsatisfactory. I tried to perform urethral lithotrity, but failed to grasp the stone, the movements of the lithotrite being impeded by a tumour which could easily be balanced between the lithotrite in the bladder and a hand on the abdominal wall. Considering the age of the patient, the fœtid cystitis, and general debility I surmised the existence of a bladder growth, probably malignant. I made a perineal incision, crushed the stone, and removed it. I then introduced my finger into the bladder and thoroughly examined the tumour. Its surface was rough and fragments were easily detachable, and I therefore considered my diagnosis of malignant tumour fully confirmed. The patient died a few days later, partly from exhaustion and partly from septicæmia. On post-mortem examination the tumour situated at the summit of the bladder turned out to be a stone enclosed in a sac communicating with the general bladder cavity by a tiny passage through which a probe could only be passed with great difficulty. The whole cavity of the bladder was lined with pendulous granulations due to the presence of innumerable bilharzia embryos. In this case the communication between the sac and the bladder was so minute that the stone could not have been reached by any operation from the bladder cavity. Had an exact diagnosis been possible a supra-pubic operation with incision through the peritoneum into the cyst might have been attempted. Under the circumstances, however, it is doubtful whether the ultimate result would have been different. The third case was diagnosed before the lithotrite was introduced. I am, however, in doubt as to whether this was not a case of stone in the right ureter. On introducing the lithotrite I found, as I had found when sounding, that the stone could not be felt until I had reversed the lithotrite and insinuated its extremities into a cavity situated behind the prostate and to the right of the

FIG. 9.

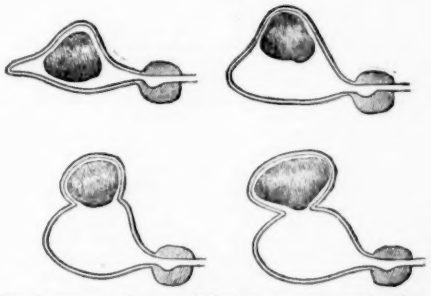


Examples of encysted stones. (Semi-diagrammatic.)

[4] Brit. Med. Jour., Nov. 17th, 1888.
[5] Transactions of the Royal Academy of Medicine, Dublin, 1890, p. 170.
[6] St. Bartholomew's Hospital Reports, 1891, p. 117.
[7] Transactions of the Pathological Society, vol. xlv., p. 185.

middle line. A finger in the rectum was sufficient to clearly differentiate the limits of the sac and to distinguish it by its position from a post-prostatic pouch. Having guided the jaws of the lithotrite into the cavity of the sac, and carefully controlling every movement by a finger in the rectum, I was able to seize and crush the stone, and after a somewhat prolonged and difficult operation I succeeded in removing all the débris through a curved evacuator. The fourth case was easily treated by urethral lithotrity, the communication being very free between the two cavities. The condition was easily recognised (1) by the position of the stone, (2) by the result of bimanual examination, (3) by the contour of the bladder when distended with water, and (4) by a careful examination of the cavity of the bladder with a sound after operation. The fifth and sixth cases were treated by perineal lithotrity and the condition easily recognised by the finger introduced into the bladder. In both I had tried urethral lithotrity and had failed. The sixth case was particularly interesting. The patient was a boy aged about fourteen years in whom a large stone had been diagnosed. Repeated attempts to grasp the stone with a lithotrite were in vain and I opened the bladder by a lateral perineal incision. The forefinger introduced into the wound entered a large cavity distended with urine. Behind this could be recognised the stone tightly grasped by the bladder. After great difficulty this was seized and crushed and the débris removed. Digital examination then showed that the bladder was divided by an annular constriction into two cavities, anterior and posterior, of nearly equal size. The lower part of this annular constriction stretched from the opening of one ureter to that of the other. The front cavity, therefore, coincided with the trigonal pouch largely dilated; the hinder cavity represented the rest of the bladder. The origin, or rather one possible mode of origin of these diverticula, suggested itself to me in meeting with some of their earlier manifestations. I have seen, as above stated, cases of what I consider to be the first stage of the encapsulating process. This condition is indicated by the stone always occupying a special portion of the bladder cavity. It has frequently happened to me in performing lithotrity to find the position occupied by the stone evidently not depending on gravity. I know of no stone lighter than urine, yet I have often found that a stone was to be felt only at the summit of the bladder, perhaps at the very highest point of that viscus, perhaps a little to one side or the other. In all these cases the stone has always retained the same position, and in most of them I have met with difficulty in grasping the stone with a lithotrite. For some time I failed to see the explanation of this condition until a case occurred in which, having after many attempts failed to grasp the stone, I proceeded to a perineal section. On introducing the forefinger I found that the stone was fixed in its abnormal position by the grasp on it of the muscular walls of the bladder, and it was only with great difficulty that I succeeded in displacing it. Once displaced it fell to the base of the bladder and I crushed and removed it easily. After the removal of the débris I thoroughly examined the bladder bimanually and could find no trace of any cystic formation; the walls presented, moreover, no irregularity or constriction of any kind. Some months later I came across a case (No. 136 on my list) in which a very similar condition existed, with this difference, however, that after the removal of the stone there still remained an evident, though apparently muscular, constriction producing a distinct irregularity in the shape of the bladder cavity. This I consider to have been a slightly later stage of the same condition as existed in the previous case. I consider, also, the sixth case of sacculated bladder to have been a still further development of the same condition, and so on through the other cases up to No. 2, in which the sac had been almost entirely closed off. I attach the principal importance in the production of encysted stone to the contraction on it of the muscular walls of the bladder. I would sketch the history of such a case as follows. The beginning of the story is probably the descent of the stone into the bladder. There it gradually increases in size, producing more or less of the usual symptoms attendant on stone. The bladder becomes irritated and its contractions excessive. For some reason, perhaps during sleep, when the stone probably rests in one place, the muscular contraction becomes such as to grasp the stone. This contraction may be spasmodic or continuous. In the latter case, after a certain time the continuous contraction will gradually tend not only to grasp but to envelop the stone. Those portions of the bladder walls which lie immediately beyond the stone, finding no resistance except their own rigidity, will gradually form an annular constriction, dividing the bladder into two cavities, one of which is occupied by the stone. (Fig. 10.) This muscular action, if continued long enough, and especially when assisted by inflammatory deposits and their secondary contraction, is, I consider, quite sufficient to convert the cavity into a sac communicating by only a small or very small opening with the bladder cavity. It is quite comprehensible even that this opening might become completely closed. I think that there are certainly, therefore,

FIG. 10.



Showing process of encapsulation from muscular contraction. (Diagrammatic.)

two methods at least by which an encysted stone may be produced—the first is by retention of the stone in the ureter and the second by muscular and cicatricial contraction on it of the bladder walls. The first method has been certainly demonstrated by the discovery of stones in the ureter as it pierces the bladder walls. The second method is rendered very probable (1) by its physiological possibility; (2) by the various stages observed in the cases quoted above; (3) by the fact that nearly all encysted stones fill the cyst they occupy; and (4) by the fact that while sacculated bladders from distension are common, cysts are very uncommon except in connexion with stone. The sixth case of encysted stone is particularly interesting on account of the position of the constriction. The lower part of the ring coincided exactly with the strong transverse band of muscular fibres stretching across the base of the trigone from one ureter to the other. The contraction of this band was in all probability the commencement of the encysting process, which extended later so as to completely surround the stone and to produce a double bladder cavity. I have examined many large stones, two in my collection, one of 36¼ oz. and one of 14 oz., one in the collection of Norwich Hospital (a cast), and several in the collection of the Royal College of Surgeons of England, and I have found on the under surface of nearly all of them a groove produced, I think, by the contraction of this transverse muscular band. I think that in many cases the portion of the bladder cavity behind this band contains the greater part of the stone, the portion in front of it forming the imperfectly acting urinary reservoir. This contraction of the muscular coat of the bladder on the stone is, I think, therefore, a great agent in producing a condition of encystment. It is at the same time the means of producing considerable alleviation in the symptoms due to the stone, inasmuch as it largely limits its movements. It has therefore the appearance of being an attempted cure, or rather alleviation, on the part of nature, and helps to explain the prolonged periods for which large stones have been patiently carried by their unfortunate possessors.

3. *Where the stone has been lodged in a retro-prostatic pouch.*—In Egypt prostatic disease is of very rare occurrence, and the number of cases of stone complicated in this way has not in my experience been great. The condition when met with also has been due much more to pouching of the bladder than to an enlargement of the prostate. The pouch in consequence is always largely open and the difficulties presented by it comparatively slight. In fact, I consider that a post-prostatic pouch when largely open is rather a help than a hinderance to the detection of the stone and to the performance both of lithotrity and

lithotomy. With regard to detection, if it is made a routine practice to search the post-prostatic pouch it becomes the easiest place to find a stone. In lithotrity the pouch lies open in the most favourable condition for receiving fragments and forms a happy hunting ground for the reversed beak of the lithotrite. In lithotomy the pouch forms a swelling which the knife of the veriest tyro cannot miss. A pouch of this description presents, however, a complication under two conditions. Firstly, it is apt to retain tiny fragments even after very careful washing out. I have found that this may usually be avoided by using a slightly curved evacuator the beak of which is reversed into the sac. Careful washing out, injecting only very small quantities of water very slowly so as not to displace the fragments, is, when combined with equally careful searchings with the reversed sound, almost certainly successful. Secondly, it is apt to retain residual urine during convalescence. For this the simplest treatment is to make the patient pass urine while lying on his abdomen. Should cystitis ensue the bladder must be carefully washed out.

4. *Where the stone has been lodged partly in the urethra and partly in the bladder.*—This condition is uncommon and as a rule presents but little extra difficulty as regards treatment. The symptoms which may lead to a suspicion of the existence of this condition are two: (1) great increase of pain after micturition from contraction of the neck of the bladder on the stone, and (2) complete mechanical obstruction to the passage of any urine. The diagnosis is easily made on passing the sound; the only condition likely to be mistaken for it is the existence of a stone in the prostatic urethra. The treatment in both cases is the same. An attempt should be made to push back the stone into the bladder cavity. This is usually best accomplished by means of a large, straight evacuating tube which, guided and assisted by a finger in the rectum, is made to displace the stone from the depression or dilatation in which it is buried and to push it onwards. No great force must be used in these manœuvres, and should they fail a perineal incision should be immediately practised on to the stone.

There are of course various other positions which may be taken up by urinary calculus. In addition to the usual situations occupied by stones in the kidneys, ureters, prostate, urethra, prepuce, and scrotum, they have occasionally been met with partly or entirely outside the urinary organs. Such cases, however, do not come under the category of bladder stones, to which alone my observations refer, and I shall leave them out of consideration. The question to be decided, therefore, is, given that a stone has been recognised as encysted either by partial retention in the ureter, by sacculation of the bladder, or by a post-prostatic cyst, which is the best method of treatment? With regard to a stone partially retained by the ureter I have already expressed my opinion. When the stone is situated in a sacculus or diverticulum of the bladder the method of treatment should depend chiefly on the relative or actual size of the mouth of the sac. Or assuming the sac to be produced by muscular action, I would state my opinion in this way, that the method of treatment should depend on the stage of development of the sac. In the very earliest stages—viz., in those in which the stone is simply grasped by the contraction of a portion of the muscular walls—urethral lithotrity is plainly indicated. The only difficulty is in getting the first grasp of the stone. This difficulty may as a rule be easily overcome by distending the bladder with water. I have already referred to the methods I employ when crushing a large stone on which the whole bladder is firmly contracted. The conditions existing in the first stage of encystment of a stone are very much the same and the graduated pressure of the hydrostatic douche is equally efficient. After the introduction of a few hundred grammes of water the muscular contraction gives way and the stone drops to the bottom of the bladder either by itself or with slight help from the sound. When the process has arrived at a later stage and there is a definite permanent constriction of the bladder cavity, distension with water is of little avail. If the opening into the sac be large—say, equal in diameter to two-thirds of the diameter of the stone—and if the stone moves freely in the sac, an attempt may be made to perform urethral lithotrity. Such an operation must, however, be conducted with the greatest care and patience. That it is possible is shown by the success of the three cases (Nos. 1, 3, and 4) in which it was performed. It is, however, an operation which should only be attempted by a lithotritist in constant practice. Failing urethral lithotrity, the selection seems to be between perineal lithotrity and suprapubic lithotomy, and I think that each operation is fitted for a separate class of case. Those cases which seem suitable for urethral lithotrity from the largeness of the mouth of the sac, but in which this operation cannot be carried out, may, I think, be treated with a good prospect of success by perineal lithotrity. Those cases which, from the smallness of the opening, are evidently unfitted for urethral lithotrity are equally unfitted for the perineal operation and should, if they are interfered with at all, be treated by suprapubic cystotomy.

(To be continued.)

ON THE CLINICAL VALUE OF DIURETIN.

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WITH special drugs of this description the difficulty the practitioner meets with is to determine the particular class of cases in which they may be of value. When first introduced these therapeutical agents are given somewhat at random, and most often only isolated cases are reported or the results merely tabulated under a symptomatic heading without any differentiation of the real pathological conditions: hence arises much of the praise which is lavished on indifferent drugs, while others which have a real clinical value are allowed to fall into disrepute, especially so in the case of a drug such as diuretin, which is meant for the relief of a symptom under certain conditions which can only be determined after a long period of probation. Having seen this particular diuretic used in a certain number of cases, I have chosen a few typical cases in which it was given with varied results as the means of furnishing the best indications for further investigations.

CASE 1.—A man aged fifty-seven years was admitted to the French Hospital in September, 1893, with œdema of the lower extremities, marked cyanosis, difficulty of breathing, and scanty secretion of urine. He had been ill for several months and the disease had made rapid progress within the last three weeks. There was a well-developed murmur accompanying the first sound, the pulse was irregular and hard, the superficial veins were congested, and the patient was unable to remain for any length of time in bed. He was ordered digitalis and nux vomica, and improved gradually at first. At the beginning of October the secretion of urine became again much diminished and diuretin was ordered in two-grain doses every hour with good results. The urine, which had been smoky, dark-coloured, and thick, became rapidly clear and increased in quantity. Three days after the beginning of this treatment the patient was passing four pints in the twenty-four hours; he could remain in bed with comfort and slept comparatively well. After five days the diuretin was stopped and larger doses of digitalis substituted. The œdema of the lower extremities, however, continued and punctures were made. The patient rapidly improved, the cyanosis disappeared, the breathing was free, and by the beginning of December he was able to leave the hospital and resume his work.

CASE 2.—A man aged forty-four years was admitted to the French Hospital towards the end of 1893. He was a sturdily built individual, but had been suffering from shortness of breath and pain in the left side over the region of the heart for several years. For the last three months he had been obliged to relinquish his occupation, complaining mostly of a hard, hacking, dry cough, a sense of oppression over the chest, and sleeplessness. He could not keep the horizontal position and passed most of his time in an armchair, bent forwards, with his head reclining on the side of the bed. The physical signs consisted in a loud murmur accompanying the second sound and a jerky, hard pulse with occasional intermittency. The urine was thick and coffee-coloured, with a heavy deposit, and contained a small amount of albumin, while the quantity of urine varied greatly, but was at times very scanty. The case was one of aortic regurgitation. He was put on digitalis and nux vomica, with a mixture containing codeia and oxymel scillæ to relieve the cough. The digitalis had only a transient action; at the end of ten days it failed to give any relief

and was abandoned. When resumed a fortnight later the patient seemed to improve, but about a month after his admission he became much worse and the quantity of urine rapidly diminished. He passed only a few ounces at a time and sometimes not half a pint in all in twelve hours. The œdema of the lower extremities also rapidly increased. He was then ordered two grains of diuretin every hour. The drug acted well. In the first twenty-four hours the patient passed over two pints of urine. It was still thick, but improved on the second day; on the third day it amounted to between three and four pints. After four days the œdema had almost entirely disappeared. Tincture of strophanthus was then substituted. The general condition had also greatly improved; the patient slept well and was able to remain in bed without inconvenience. He felt so much better that a fortnight later he asked to leave the hospital. The amelioration, however, could only be temporary, and I heard that he died about three months later.

CASE 3.—A man aged thirty-seven years had been suffering for nearly two years with disease of the liver—hypertrophic cirrhosis. He had been able to work until a fortnight before admission to hospital, when he was seized with pains in the loins, a general sense of malaise, and nausea; he noticed that his eyelids were puffy and his ankles swollen. He rapidly grew worse and had to keep to his bed. On his admission he had marked symptoms of uræmia and had scarcely passed any urine for the previous two days. There were œdema of both legs and pitting on pressure, the abdomen was distended with fluid, and there were twitching of the muscles of the face and hands and low muttering delirium with lucid intervals. The urine contained albumin, but not in large quantities. He was given two grains of diuretin every hour combined with a mixture of nitrate of potash and acetate of ammonia. Six hours after admission he passed eight ounces of urine and a few hours later ten ounces. The case was hopeless from the beginning, and the symptoms were such that he never rallied but died the next morning.

CASE 4.—This patient was a man aged thirty-nine years who had not felt well for several months previously to his admission to hospital. Three weeks before he had an attack of influenza, and a few days later had felt pains in his shoulders, left side, and over the loins. After a week his abdomen began to swell, and a day or so later his legs and scrotum. He noticed that his urine was thick and that the quantity passed was diminishing. On admission the abdomen was found to be enormously distended, there was anasarca of the lower extremities extending up to the groin, and œdema of the scrotum and penis. The tongue was furred and dry, the temperature was normal, and the heart was sound. The right lung was healthy. On the left side there was slight pain along the left axillary line and slight dulness over the same region. The urine was coffee-coloured, with a thick deposit of phosphates, and contained one-fifth albumin. Under the microscope large hyaline and epithelial casts were seen. After eight days, as there was no improvement, diuretin was given in the same way as above, but after five days it had produced no appreciable result and was abandoned.

CASE 5.—The patient was a young girl who had been suffering from disease of the kidneys for over four months and who on admission to hospital had all the signs of large white kidney following an acute attack of parenchymatous nephritis. The face was puffy and fatty, and she was suffering from advanced dropsy. The urine contained large irregular hyaline casts, blood corpuscles, and pus cells, and was almost solid with albumin. In this case diuretin was given without producing any effect whatever.

As stated above, in considering the value of a therapeutical agent of this kind it is not the ultimate termination of the case which should form the basis of judgment, but its effect on an individual symptom. Such a drug as diuretin cannot pretend to be a specific treatment in any disease, and its action can only be exerted for the relief of a distressing complication. Reviewing, then, the results of these cases it appears that when the kidney affection is primary and well established—that is, when the deep parts of the organ are affected, as in the parenchymatous form of acute nephritis—and when there is much albumin present, diuretin is of little or no value, while in those cases in which the kidney trouble is secondary to morbid lesions in other organs and the epithelial layer of the urinary tubules in the seat of disease, this diuretic is a valuable therapeutical agent.

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CANCER OF THE RECTUM: TREATMENT, OPERATIVE OR PALLIATIVE.

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SURGEON TO THE GREAT NORTHERN CENTRAL HOSPITAL; ASSISTANT SURGEON TO ST. GEORGE'S HOSPITAL.

AFTER a considerable experience of cases of cancer of the rectum I think that it may be useful to discuss the question of the treatment, operative or palliative, of malignant disease affecting this part of the body. One reason for making this review is the fact that some authorities appear to hold that all cases of cancer of the rectum demand either excision or colotomy quite irrespective of many points which require careful attention. Thus cases sometimes come to one in which excision is requested when colotomy should really be done, or *vice versâ*, or, again, when neither operation is needed. It must not be inferred that I am in any way opposed to excision of the rectum or inguinal colotomy, for they are excellent operations, and when employed in suitable cases afford great relief to the sufferer and are highly satisfactory from every point of view. My intention is merely to show that, useful as they are, they should not be used or brought into disrepute by being employed in all cases of cancer of the rectum. During the last eight years I have seen about 720 cases of this malady, having performed excision 62 times and colotomy 138 times. I have thus been led to make a mental classification of the cases according to the various lines of action which should be pursued. In arriving at this classification the following points must be kept prominently in view: (*a*) the age of the patient; (*b*) the position and extent of the growth; and (*c*) the nature of the symptoms—viz., obstruction of the bowels, constant diarrhœa, hæmorrhage, or pain. By this classification cases of cancer of the rectum may be divided into those which are fitted for excision, for colotomy, or for palliative treatment.

The question of age is a most important matter. If the patient's age does not exceed forty-five years I make bold to say that very little is to be gained by excision, even if the growth is within a reasonable distance from the anus. It appears that after excision in such cases the malignant disease returns, often before the wounds resulting from the operation have healed. In two or three instances, however, I have excised both the growth and the recurrence, and in one case after repeated excision of the recurrence the malady ceased to return; but this case must be taken as an exception to what may be called the rule. Again, colotomy seems to prolong the patient's life for an extremely short period. Indeed, unless the surgeon is absolutely driven to perform colotomy palliative treatment is the right course to pursue. In patients between forty-five and sixty years the prognosis as regards excision is more favourable, and this operation should be attempted when the growth is well to the lower part of the rectum. In this class colotomy for disease high up the rectum should be performed only when the symptoms presently to be described are well marked and when palliative treatment has failed to afford relief. For patients above sixty years excision is extremely favourable in suitable cases, and should always be attempted when there is a fair chance of a thorough removal of the growth. The remarks with regard to colotomy are the same as those applied to patients between forty-five and sixty years. It will be readily seen from the above classification that the older the patient becomes the less rapidly does the malignant disease grow and the less likely is it to recur.

The next points for consideration are the position and extent of the growth. For practical purposes the question of position may be sub-divided as follows: (*a*) When the disease is near the anus and healthy mucous membrane can be felt above the growth; (*b*) when the growth is higher up the bowel, but can be easily felt and is freely movable, although its upper limits may not be readily definable; and (*c*) when the growth is quite high up the rectum—i.e., at the junction with the sigmoid flexure—and can only just be felt by the finger. In the first class the growth, if movable, should be freely excised. In the second class Kraske's

operation may be performed if the patient consents to undergo it on learning of its serious nature and the danger he may incur. In cases falling under the third sub-division colotomy is certainly a justifiable proceeding if the symptoms warrant the necessity.

To return to the symptoms. With regard to obstruction, if the case is one fitted for excision the constipation may be relieved by free excision of the growth. If, however, the tumour is so high up as to negative excision, and if it has been found impossible to remedy this obstructed condition by the use of mild laxatives, colotomy should not be delayed for one moment. To postpone colotomy when the case is in such a state only entails much suffering; further, the delay may prove a great source of danger, for the gut may give way above the seat of obstruction or the patient may, so to speak, be poisoned by fæcal accumulations. Moreover, when the colotomy has eventually to be performed it is rendered much more difficult to do, and thus an operation which really is extremely easy may by tardiness be converted into a grave and dangerous proceeding. Constant spurious diarrhœa is another symptom frequently complained of by patients suffering from cancer of the rectum. When it is due to a growth within the excisable region it may be cured by an excision. But if that operation is out of the question, and if one has failed to remedy this wretched and distressing condition by treatment with various forms of opiates, laxatives, and so forth, then and then only is it justifiable to perform colotomy in order to give the patient relief. The same remarks apply to the other symptoms—viz., to frequent hæmorrhage or to constant pain.

As was stated at the outset, I do not consider that all cases of cancer of the rectum should be treated either by excision or colotomy. I have met with many patients who have been advised to undergo colotomy, but who by careful and judicious treatment have been enabled to continue at their respective occupations without this operation being necessary for some considerable time. There are some who advise colotomy in nearly all cases of cancer of the rectum which come before them, imagining that by diverting the fæces they may succeed in arresting the rapidity of the growth. This I do not believe to be in the slightest degree the case. The patients referred to above, when their malady has been judiciously treated, lived quite as long as they would have done if colotomy had been performed in the early stages of the disease. One last remark must be made. In cases of cancer high up the bowel it may be necessary to starve a patient or at least subject him to what is practically starvation in order to keep him comfortable. In consequence of this starving the patient may become exceedingly emaciated and may perhaps express the opinion that the treatment is worse than the disease. In such a case I should without any hesitation perform colotomy so that the local symptoms—viz., obstruction—may be obviated. When this has been done the patient can eat and drink as he chooses and, as a rule, rapidly puts on flesh and recovers his general health for a time—that is to say, until the malignant disease begins to attack other important organs.

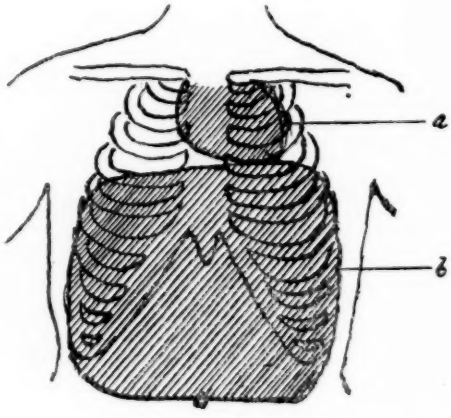
Grosvenor street, W.

LARGE HYDATID TUMOUR OF THE LEFT PLEURAL CAVITY SIMULATING HYDATID DISEASE OF THE LIVER; OPERATION; RECOVERY.

BY ARTHUR P. LUFF, M.D. LOND.,
PHYSICIAN IN CHARGE OF OUT-PATIENTS AT ST. MARY'S HOSPITAL.

THE patient, a married woman aged thirty years, was admitted into St. Mary's Hospital under my care on Jan. 8th, 1895, complaining of shortness of breath and severe pain in the left side of the chest. She stated that in 1875, when she was ten years of age, she was tapped, and in 1884, when she was nineteen years of age, she was tapped in the epigastrium, after which she remained well for several years. Unfortunately no medical account of these tappings is obtainable, but as the patient stated that at the time of the second tapping she was questioned on the subject of contact with dogs, the presumption is that she was then suffering from hydatid disease. She lived at the time with her uncle, who in 1873 was tapped three times in St. George's Hospital; in 1884 her uncle "brought up" a quantity of fluid and died whilst being conveyed to the same hospital. This would suggest a common origin of the disease. Seven months previously to admission she noticed that she was increasing in size above the waist, and about the same time she experienced tenderness on the left side and front of the chest. Two months before admission she began to suffer from shortness of breath, and the pain on the left side of the chest gradually assumed a shooting character and became very severe, shooting up to the left shoulder and down the left arm. During the three or four weeks preceding admission she fainted a few times and had occasional shivering fits. Seven days before admission she had a slight attack of jaundice, which, however, soon passed away. Five days before admission she was seized with severe shivering fits, great pain in the left side of the chest, dyspnœa, and vomiting after food. When this attack had lasted about five hours she coughed up about a pint and a half of clear fluid of a pale yellow colour, which gave her immediate relief, but a few hours later the pain and dyspnœa returned, although the symptoms were less urgent than before. On admission the patient presented a somewhat wasted appearance; there was considerable dyspnœa, accompanied by a hard, dry cough, but no cyanosis. The left side of the chest was very painful and tender; the temperature was 101° F., the respirations were 40, and the pulse was 100. She stated that the swallowing of food was somewhat difficult, the difficulty being experienced at a point about half-way down the œsophagus. On inspection a large tumour was seen causing marked prominence of the epigastric, both hypochondriac, and the upper portions of the umbilical, and both lumbar regions, reaching below to the umbilicus. (Fig. 1.) The surface of the tumour

FIG. 1.



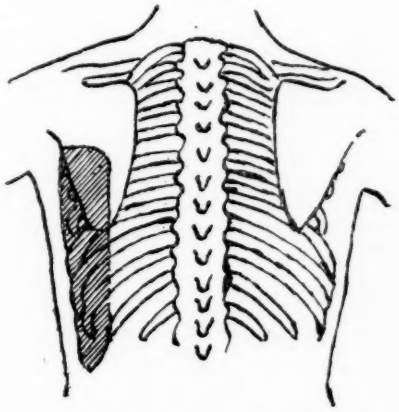
a, Heart. *b*, Hydatid cyst.

was hard and smooth. Distinct fluctuation could be felt in two or three places, but no thrill was obtainable. The tumour moved with respiration. Percussion dulness was obtained over the left part of the chest up to the first intercostal space; in the mid-axillary line on the left side dulness extended from below upwards to the fifth rib. This dulness extended at the same level over the lower part of the back of the chest on the left side as far as a line dropped vertically from the inferior angle of the left scapula (Fig. 2), inside which line a fairly resonant lung note was obtainable. Over the right front of the chest percussion dulness extended upwards to the fourth rib (Fig. 1) and to a corresponding level in the axilla. Over the whole of the right back a resonant lung note was obtainable. No breath sounds could be heard on auscultation over the entire dull area, and vocal fremitus could not be obtained. The heart was pushed considerably upwards (Fig. 1) and could be felt beating on the left side of the chest, the maximum impulse being obtainable in the second left intercostal space. The cardiac dulness was continuous with the dulness below, and extended a finger's breadth to the right side of the manubrium. The

heart sounds were normal. The urine was of specific gravity 1030, acid, and free from albumin and sugar. The pint and a half of clear fluid coughed up five days before admission were evidently due to rupture of a cyst into the lung, and the temperature of 101° on admission was probably caused by the rupture. The absence of hæmoptysis—often an early symptom of pulmonary hydatid disease—and the fact that the heart was displaced directly upwards and not pushed to the right side, were indications that the growth was not a primary one of the left lung or pleura; moreover, there was no deficiency of thoracic movement on the left side, as there generally is in pulmonary hydatid disease. My diagnosis was extensive hydatid disease of the liver, with probable extension of the disease into the left pleural cavity. Mr. Silcock, who saw the case with me, agreed with this diagnosis and decided to operate.

Ether was administered and Mr. Silcock opened the abdomen by a four-inch incision in the middle line between the ensiform cartilage and the umbilicus. The fleshy-looking cyst wall was exposed bulging downwards into the

FIG. 2.



abdominal cavity. An effort was made to draw off some portion of the fluid from its interior by means of aspirator needles and ovariotomy trocars. These instruments speedily became blocked; hence, having so disposed a number of sponges that the general peritoneal cavity would be thereby exempted from infection the cyst wall was freely incised. Immense quantities of daughter cysts escaped, their eviction being greatly facilitated by using a stream of sterilised water (temperature 100°) projected into the cyst through a glass tube tipped by a short indiarubber one in connexion with an irrigator cistern; the pressure of the fluid could easily be regulated by raising or lowering the latter. Much time was thus spent, the irrigation being continued until the contents of the cyst had been thoroughly cleared out. The long glass tube was most useful in that the depths of the cyst beyond reach of the finger-tips were easily reached by its means. The cavity of the cyst being packed with large sponges, its connexions were examined. That portion of the cyst wall incised was indistinguishable from the left lobe of the diaphragm, the latter having been displaced downwards by the cyst occupying the left pleural cavity. The left lobe of the liver lay to the right of the mid-line, atrophic and shrunken from pressure. Air whistled in and out of the opening into the cyst with the respiratory movements and the subserous tissues below the diaphragm near the spine became emphysematous. The peritoneal surface of the cyst wall was united to that of the edges of the parietal wound and the latter partly closed, a large drainage-tube being passed deeply into the cyst. The weight of the cyst walls removed amounted to six pounds four ounces; the amount of fluid was computed to be six pints. The subsequent course of the case requires but slight notice. The wound remained aseptic, the cyst being frequently washed out, and drainage was effected by keeping the patient lying on her right or left side or in the prone position.

Remarks.—The great surprise at the time of the operation was to find the liver normal in size. The well-defined lower edge of the tumour that before the operation could be felt reaching to the level of the umbilicus was evidently due to the diaphragm having been pushed down by the hydatid tumour situated within the thoracic cavity. During and after the operation the entry of air into the cyst cavity during inspiration (the right half of the diaphragm was certainly not paralysed) was an indication that the cavity was above the diaphragm. The proofs that the cyst was connected with the liver were: (*a*) that a quantity of bile came away from the wound for some time; (*b*) some of the daughter cysts were bile-stained; and (*c*) the parent cyst wall contained columnar epithelium and fibrous tissue, and the source of the former might have been the biliary ducts or gall-bladder. The probability is that originally the woman suffered from hydatid disease of the liver and that some of the daughter cysts passed through the diaphragm into the left pleural cavity from the parent hydatid in the liver.

Weymouth-street, W.

DEATH UNDER CHLOROFORM.

BY J. HOPKINS WALTERS, M.R.C.S. ENG.,
SURGEON TO THE ROYAL BERKSHIRE HOSPITAL.

THE following two cases, one of death and the other of threatened death while under chloroform, seem to be worthy of record.

CASE 1.—A boy aged six and a half years was anæsthetised by chloroform on March 27th, 1896, for the removal of tuberculous cervical glands. In other respects he seemed to be healthy and had returned only a few weeks previously after being five months at the seaside. The operation was performed at 10.30 A.M., a breakfast-cupful of beef-tea having been taken at 8 A.M. in lieu of breakfast. The glands were large and numerous; the surrounding tissues were infiltrated and unusually vascular, rendering the dissection down to the sheath of the vessels delicate, difficult, and prolonged. There was free hæmorrhage, amounting, probably, to three or four ounces (but this is always most difficult to estimate; it possibly might have been more, not much). The operation was almost finished when sudden arrest of oozing from the raw surface was noticed to take place, while at the same moment the experienced anæsthetist who was kindly giving the chloroform drew attention to the patient's pallor. I give in my friend's own words the notes he has made on the case: "The boy had been under chloroform for about forty-seven minutes, during which time he took the anæsthetic in a manner that gave rise to no more than ordinary anxiety. The first unfavourable sign noticed by me was a sudden and extreme pallor, not the bluish grey of respiratory failure, but a deathly whiteness. After a few seconds the breathing stopped. Immediately the radial artery was felt, but there was no pulse. The heart was auscultated, but there was no pulsation. Artificial respiration was at once performed, with the result that a very irregular sighing or gasping respiration was established. During the artificial respiration the air entered and left the lungs quite freely. The tongue was pulled out forcibly with tongue forceps and kept out while artificial respiration was maintained for three-quarters of an hour; nitrite of amyl was administered, and brandy and strychnia were hypodermically injected." In addition to the above friction was made over the heart while the head was depressed and the body raised, but all to no purpose. The child was dead.

The case of threatened death under chloroform presents similar features to the above fatal case, but was followed by a happier result.

CASE 2.—A child aged seventeen months, the subject of large double inguinal congenital hernia, was put under chloroform for the operation of radical cure. The child took the anæsthetic well and was fully under its influence when the incision was made. Two sweeps of the knife were followed by the application of a sponge, and on making the third sweep I noticed that blood ceased to flow. Looking round I found the child deathly white and apparently dead. Neither radial pulse nor heart pulsation could be felt. Artificial respiration was at once performed, the pulse returned, and in a few minutes the child had so well recovered as to enable me to complete the operation I had begun. In consequence of this *contretemps* I decided to postpone

operating on the other hernia until after recovery from this operation. Owing to a little gastric disturbance the second operation was not performed for two months, and previously to the chloroform being given I warned the administrator, who had also been the chloroformist on the former occasion, to take especial care on account of the previous narrow escape. At the same stage of the operation apparent death recurred in a manner precisely similar to the previous occasion, with like treatment and fortunate result, followed, as before, by completion of the operation. This time we all were quite on the alert, and were thus able to make sure that it was a case of heart failure, the pulse stopping before respiration ceased.

These two cases present the following identical features: (1) both were children within the age at which chloroform can be given with the greatest immunity from accident; (2) auscultation indicated a sound heart in each case; (3) on each occasion a Skinner's inhaler was used; (4) in neither instance was the operation commenced before the conjunctival reflex had disappeared; (5) in each the first indication to the operator was blanching of the wound coincidently with the observation by the anæsthetist of sudden general pallor; and (6) uniformly the cause of death and threatened death was cardiac failure. The differences between the cases are that while the fatal case showed no unfavourable symptoms until the end of the operation the other exhibited them at the beginning: the one had taken a quantity of chloroform and the other little; the one had suffered loss of blood and shock from the operation and the other none. These probably were the determining factors between death and recovery. On comparing with the "respiratory failure" dictum from Hyderabad the statistics of THE LANCET Commission appointed to Investigate the Subject of the Administration of Chloroform and other Anæsthetics from a Clinical Standpoint,[1] one is struck by the enormous majority of reported primary pulse failures, which, together with the numerous cases of accident occurring in the very earliest stage of chloroform administration, indicate that much has yet to be learned of the causes of these calamities. The observations of Rosenberg and Guérin seem to throw on them some light, and their conclusion that respiratory and cardiac depression are due to reflex rather than direct action deserves careful investigation. Certainly, until such conclusion is negatived or confirmed the suggestion to avoid nasal inhalation or to neutralise the local effect of chloroform by thorough cocainisation of the nasal cavity is worthy of universal adoption. That ether is so much safer than chloroform as to outweigh the great advantages of the latter has still, I think, to be proved after the honest tabulation of its delayed disastrous after-effects.

Reading.

NOTES ON A CASE OF COMBINED SCLERODERMA AND RAYNAUD'S DISEASE.

By J. A. HENTON WHITE, M.B. DURH.,
SURGEON TO THE BIRMINGHAM GENERAL DISPENSARY.

THE following case appears to me worthy of note as throwing additional light on certain cases of scleroderma and indicating a possible etiological connexion between these and Raynaud's disease.

A married woman aged forty-four years sent for me on account of a hardening of the skin in various parts of the body, rheumatic pains in her joints, and attacks of "dead fingers." On examination I found that the integument of the face and forearms, and to a less extent of the arms, thighs, abdomen, and chest, was thickened and indurated. It could not be pinched up from the subjacent tissues and the natural folds and wrinkles were for the most part obliterated. On the forearms, where the contraction of the thickened skin had gone so far as to painfully compress the bones and tissues, the colour of the surface was rather brown. The appearance of the chest was white and cicatricial, whilst the epidermis of the legs and the lower part of the body was covered by coarse flakes not unlike psoriasis. The case was, in a few words, a well-marked one of that affection described by Fagge as scleriasis diffusa and now usually termed scleroderma. In addition to these integumentary changes were arthritic lesions, many of the large joints, and notably the temporo-maxillary articulations, exhibiting the coarse crepitus of arthritis deformans. Perhaps the most interesting point about the case, however, was the occurrence of frequently repeated syncopal attacks in the fingers and hands. These attacks came on "twenty or thirty times a day" after the least exposure to cold. The woman had suffered from syncopal attacks in one of the fingers of the left hand for many years. Three years ago she had an eruption of "heat lumps" on the arms, face, and legs, which itched and smarted considerably. These soon became blebs and lasted about six months before finally disappearing. One and a half years ago another eruption of "heat lumps" appeared on the forearms and legs, but on this occasion no blebs formed. Accompanying those on the legs there was considerable œdema. These "heat lumps" had since this time frequently recurred, and gradually the skin had become hard, first in the forearms and then in the face, legs, &c. At times the induration had spread, but the extension had been preceded by the appearance of the lumps. With the first occurrence of the "heat lumps" (one and a half years ago) she also began to have symmetrical vaso-motor spasms in both hands, and lately these phenomena have been very frequent. A few months later her joints became affected, and now she is much crippled in her movements and has especial difficulty in mastication.

Regarding this case from a pathological standpoint it seems possible that the scleroderma, which is anatomically a simple overgrowth of fibrous tissue in the deeper layers of the dermis, may be due to a chronic inflammation resulting from an intermittent blood-supply. This vaso-motor factor may be also assisted by a want of proper trophic stimuli to the tissues affected—here the skin and joints. The initial heat lumps and blebs, as also the œdema, are all occasionally present in Raynaud's disease. Bristowe speaks of a persistent eruption of wheals or erythematous tubercles, in connexion with which vesicles and blebs may be developed, as occurring in this latter disease. Another argument in favour of a vaso-motor explanation of scleroderma is found in the fact that both diseases occur in those classes of patients whose vaso-motor apparatus is very active—namely, women and young people. With regard to treatment the application of warmth to the affected part as a preventive of the spasms, and galvanism with the anode placed in the hand and the kathode on the spine during the spasms might be tried. Medicinally, drugs producing arterial dilatation seem to be indicated. Those, too, which are not too evanescent in their action should be chosen. My patient is at present on jaborandi and salicylate of soda and is taking fifteen minims of the tincture with fifteen grains of the salicylate three times a day. This treatment has produced no sudoresis at present. Jaborandi, however, I hardly consider the ideal drug as it is somewhat irritant to the kidneys, which in skin cases are apt to be irritable. Thyroid extract might be useful, as it certainly, in my experience, causes sudoresis and lowers blood pressure, and I intend to try this if there should be any spread of the disease under the jaborandi. Of course, when the fibrous tissue is once laid down its complete disappearance is very improbable. Massage, however, might render the skin more pliable.

Birmingham.

[1] THE LANCET, March 18th and 25th, April 15th and 22nd, May 6th and 20th, and June 17th, 1893.

DURHAM UNIVERSITY MEDICAL GRADUATES' ASSOCIATION.—A large number of the members of this association resident in the metropolis dined together at the Café Royal, Regent-street, on April 17th, under the presidency of Dr. Arthur H. Robinson, the President of the association. The réunion was a pleasant one, and the association was honoured by the presence of several guests, the invitation having been extended to graduates of the University outside the association.

HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S-PARK.—At the annual meeting of the governors of this institution the Earl of Carnwath, speaking from the chair, stated that the annual report showed an increase in the work and a diminution in the contributions. He referred to the fact that in four years the lease of the present building would expire, and a new building, involving the creation of a building fund of some £10,000 or £15,000, would soon become a pressing necessity. He hoped that some munificent gift would soon be forthcoming towards this object.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

A CASE OF ACROMEGALY TREATED BY PITUITARY EXTRACT; REMARKS.

(Under the care of Dr. H. D. ROLLESTON.)

THIS case is a typical one of acromegaly and differs but in degree from the majority of recorded cases. The remarks of Dr. Rolleston remind us how very far we are at present from understanding the exact nature of this disease, and no apology is required for bringing a carefully observed case before our readers. We regret that it is necessary to record another failure in the treatment with pituitary extract. At present the extract has not had a very extensive trial; little encouragement for the future is, however, given by our present experience of it. There are certain lines along which investigation should proceed and certain questions which require answers. We want to know if there is any relation between the thyroid gland and the pituitary body, also what the relation is between these two bodies and the nervous system, before we can make very definite progress. In many recorded post-mortem examinations the thyroid gland as well as the pituitary body has been described as diseased. Dr. Bonardi[1] found no tumour of the pituitary body, but atrophy and sclerosis of the thyroid gland in a case examined by him.

A married woman aged thirty-four years, who had been under the care of Dr. Hollis of Wellingborough, was admitted into St. George's Hospital on Feb. 11th, 1896. She dated her illness from her last confinement in August, 1891. Since then she had suffered from fatigue on slight exertion and had had amenorrhœa. But the first definite symptom of acromegaly only appeared in the early part of 1894, when her sight began to fail, and she noticed that her hands and feet were increasing in size. In less than a year she became blind in the left eye, and at the same time her hands and feet became painful both at night and on exertion. For the last two years she had perspired much over the body and limbs, less over the face, and had felt warm even in the coldest weather, so that she had been obliged to wear thin clothing. Since 1891, and especially in the last nine months, she had been getting much stouter. Her sleep had not been so good during the last two years as it was formerly. There was no history of rheumatism or syphilis. She had suffered from headache for twelve years and there had not been any increase of it in recent years. The face was somewhat expressionless and elongated; the skin was of a dingy colour, somewhat coarse, and the subcutaneous tissues apparently thickened; the lips were not specially affected, but the tongue was large and flabby; the nose was prominent and generally enlarged, and there was a considerable degree of prognathism; the hair was coarse, thick, and did not fall out. Of the eyes, the left was quite blind and there was no pupil reflex; the right had very imperfect vision on the nasal half of the field; hemiopic reflex was present, and the nasal half of the field of vision was blind. There was well-marked primary optic atrophy with some irregularity of the discs on both sides. There was no sign of past neuritis or retinitis. There was slight exophthalmos on both sides, and the eyelids were somewhat swollen. The special senses of smell, taste, hearing, and touch were normal, and the voice was natural. The patient was of fair intelligence and showed no sign of nervousness or mental instability—in fact, she was rather phlegmatic than otherwise. The hands were characteristically affected, the phalanges being enlarged together with the overlying tissues, and justifying fairly the comparison to sausages. The wrists were enlarged, while the elbows, shoulders, and clavicles were unaffected. A marked feature was the very considerable loss of power in the hands. The patient had suffered from childhood from talipes equino-varus with some degree of pes cavus. The toes were enlarged, especially the great toes. The ankles were enlarged. The knee-jerks were present. Kyphosis was but slightly marked. The thyroid gland appeared normal and the heart and lungs were normal. There was no post-sternal dulness. The specific gravity of the urine was 1010 to 1020, it contained no albumin but 2 per cent. sugar, which, however, disappeared two weeks before she left the hospital. Dr. Hollis said that there was no glycosuria when she was under his treatment, so it was probably transient. The amount of urine varied from twenty-eight to eighty ounces. She had been in the habit of getting up at night to pass her urine, so there had been some polyuria. The temperature was normal throughout her stay in the hospital. During the month that the patient was in the hospital she was treated with tabloids of pituitary extract (5 gr.) three times a day, and when headache and pains in the limbs were urgent occasional doses of phenacetin (10 gr.) were given. Under the conditions of rest, good food, and the above treatment the pains in the head and limbs were diminished and the glycosuria passed off. The patient herself thought that, inasmuch as she could feel her knuckles more distinctly, her hands were getting smaller; but a comparison of the careful measurements taken on admission and before leaving the hospital by the clerk of the case, Mr. E. L. Hunt, showed that there was a uniform increase in all, or nearly all, the measurements. The effect of pituitary extract therefore seemed to be almost entirely negative. The question of removal of the pituitary tumour was discussed with Mr. Sheild, but the risks and dangers on the one hand and the somewhat hypothetical advantage that would accrue on its successful performance on the other did not seem to warrant its being proposed to the patient.

Remarks by Dr. ROLLESTON.—The case is a fairly typical one of acromegaly and there are only two points in the *clinical* features worthy of special notice. 1. The rapid development of optic atrophy as the result of pressure exerted by the enlarged hypophysis cerebri. The symptoms of acromegaly had only been noticed for two years and at the longest calculation the morbid changes cannot be dated back further than her last confinement in 1891, after which the menses ceased. 2. The presence of sugar in the urine; this has only been noted in a small minority of the recorded cases, though in some there has been definite diabetes mellitus. The glycosuria has usually been found to be easily controlled; in this case no restriction of diet or special treatment (other than the pituitary extract) was employed, and no sugar was present for the last two weeks of her stay in the hospital. As regards the *pathology* of acromegaly, while optic atrophy, when it occurs, and headache may be the local or mechanical effects of the enlarged pituitary body, the essential symptoms are presumably due to some alteration in the internal secretion of the gland. The internal secretion might conceivably be modified in three different ways. I. Suppression—a condition of pituitary inadequacy analogous to myxœdema or Addison's disease. The morbid condition necessary to bring this about would be either atrophy of the pituitary gland, which is not in accordance with the observed facts, for the gland has been almost always found to be enlarged in acromegaly, or destruction by a tumour. In their exhaustive paper on the Pathology of the Hypophysis Cerebri, Boyce and Beadles[2] describe a case of acromegaly with a cystic hypophysis cerebri, but the other cases of tumour given by these writers did not show signs of acromegaly. That simple absence of the internal secretion is not the entire explanation of acromegaly is strongly suggested by the disappointing results of giving pituitary extract. II. Hypersecretion due to excessive activity. Souza-Leite[3] describes the change in the gland tissue as being one of simple hypertrophy. This observation is in favour of the view that the symptoms are due to hypersecretion. If this be true, administration of pituitary extract should only exaggerate the symptoms, but the observations of Ransom[4] and Marinesco[5] show that it has practically no effect, while in a case under the care of Sir William Broadbent[6] there

[1] Riforma Medica, Naples, 1893, vol. ii.

[2] Journal of Pathology, vol. i., p. 359.
[3] Acromegaly: New Sydenham Society, 1891.
[4] Brit. Med. Jour., vol. i., 1895, p. 1269.
[5] Quoted in Epitome, Ibid., vol. ii., 1895, No. 447.
[6] THE LANCET, March 28th, 1896.

appeared to be some improvement. Oliver and Schäfer[7] find that pituitary and thyroid extracts have opposite physiological effects. Pituitary extract resembles in its action that of the suprarenal capsules, though there are points of difference. Thyroid extract has been found to exercise a curative effect in a case of acromegaly recorded by A. H. Benson.[8] Murray,[9] however, thinks it doubtful whether thyroid extract has any specific effect on acromegaly; this opinion is endorsed by Osler.[10] It is not improbable that any good it does is by influence on the general health. If acromegaly were due to a hypersecretion of the normal internal secretion of the pituitary body, the administration of pituitary extract should intensify and giving thyroid extract should remove the symptoms. If this is not the case—and it does not appear to be so—hypersecretion on the part of the pituitary gland cannot be regarded as a satisfactory explanation of acromegaly. III. Perverted function due to a heterogeneous transformation of the structure of the pituitary body (Marinesco). But in what direction the secretion is perverted is a matter of speculation. Three alternatives may be suggested. 1. The secretion might be deficient in an active principle the function of which is to restrain exuberant growth in the extremities. This, perhaps, is rendered improbable by the general failure of pituitary extract when given medicinally, and there is of course no evidence that irregular growth is spontaneously likely to occur if not kept in check. 2. The abnormal secretion might contain some toxic principle which stimulated the tissues to overgrowth. That the disease is a toxæmia receives some support from its points of resemblance to hypertrophic pulmonary osteo-arthropathy. Marie suggested that the changes in the limbs characterising the latter disease were due to the local action of poisons absorbed from the pulmonary lesions. 3. It might be thought that owing to alteration in the secretion of the pituitary the equilibrium and interaction between it and other internal secretions are disturbed. Possibly some toxic body such as was suggested in the preceding alternative might be thus produced. The thyroid and pituitary glands have been thought to be compensatory; recently they have been shown by Schäfer and Oliver to be physiologically antagonistic. Superficially there are some resemblances between acromegaly and myxœdema, and it might be thought that acromegaly is the result of a disturbance of a chemico-physiological equilibrium maintained in health by the normal activity of these two glands. Such a consideration suggests that acromegaly might be benefited by giving pituitary and thyroid extracts at the same time. The dose of the two extracts should be varied so as to get the desirable mean, but at first, perhaps, a larger quantity of the pituitary extract should be given. The failure of pituitary extract to ameliorate the symptoms of acromegaly is then somewhat in favour of the view that the cause of the disease is perverted and not suppressed or exaggerated functional activity of the gland.

BOLTON INFIRMARY.

A CASE OF TRAUMATIC VENTRAL HERNIA AND ONE OF HÆMOPHILIA.

(Under the care of Mr. GABSTANG.)

TRAUMATIC ventral hernia of the kind described in the first case is of very unusual occurrence in fact, it has received little notice in our general text-books. Such a hernia, as the result of direct subcutaneous injury, may develop immediately in consequence of rupture of the muscles in the abdominal wall, the protrusion taking place through the opening made, or atrophy with resulting weakness may ensue at the point injured and a hernia develop secondarily. Examples of the former are given by Gay, Meckel, and Bryant. The patient under the care of Gay had a blow from a buffer in the abdomen, and on dissection some of the viscera were under the skin and had come through a rent which divided the left rectus and left epigastric artery, the linea alba, and part of the right rectus. Included in the term traumatic, and much more common than those already referred to, are the herniæ which protrude through the scar resulting from the wound made by a surgeon for the removal of an abdominal tumour or for the evacuation of an abscess, also wounds of the parietes received in other ways by stab or gunshot. We are still in a condition of uncertainty as to the exact deviation from the normal which produces hæmophilia, and the facts that are known about it, such as its hereditary character, its more frequent appearance in the male, and also that it is congenital, do not help us in respect to the treatment of the hæmorrhages which are so apt to prove fatal. It is probable that antiseptic treatment with pressure will do more for the arrest of hæmorrhage in these cases than was formerly possible. When the wound suppurated and hæmorrhage frequently recurred from it the attempt to apply pressure or the application of styptics only seemed to make the wound a larger one and the fever more intense. Of the numerous drugs which have been recommended for the treatment of the hæmorrhages the only one which has seemed to us to exercise any control on the loss has been belladonna, applied externally in the event of large subcutaneous hæmorrhages, or given internally in cases of bleedings from the mucous surfaces. For the notes of the cases we are indebted to Dr. G. Wilkinson, late senior house surgeon.

CASE 1.—A boy aged fifteen years was admitted to the Bolton Infirmary on Feb. 7th, 1895, with a swelling in the left hypochondriac region the result of an injury. He gave the history that he was carrying a bundle of dye-sticks when he stumbled and fell with his abdomen on the blunt end of one of them. On admission there was found to be a swelling about the size and shape of half an orange, midway between the umbilicus and the cartilage of the tenth rib on the left side. When the patient coughed the swelling enlarged. It could be put back entirely into the abdominal cavity, and when this was done a well-defined rounded opening about one and a half inches in diameter could be felt in the abdominal wall beneath the skin. The substance protruded beneath the skin when the patient coughed and had the knotted feel of omentum. The skin over a part of the swelling was superficially abraded. The patient was put to bed, carefully dieted, and a pad and bandage were applied to the seat of injury. On March 6th the subcutaneous rent in the abdominal wall had nearly closed, so that only the tip of a finger could be introduced, and the abrasion had healed. The patient was supplied with an abdominal belt with pad and was allowed to get up. On Dec. 9th the patient came up for inspection. He had resumed work and discontinued the use of the belt. There was a prominent scar marking the seat of abrasion, which showed signs of cheloid growth. The rent in the muscular layers had quite closed and firm scar tissue was felt.

CASE 2.—A boy aged eleven years was admitted on June 18th, 1894, with hæmorrhage from the cheek and gums. He gave the history that he was struck on the left cheek with a cricket bat four days before admission and that there had been continual bleeding from his gums and cheek since. His previous history was as follows. When two years of age his tongue ulcerated and bled for three weeks; at three years of age he received a wound on the back of his head, which bled during five or six weeks; when seven or eight years of age he had a wound of the temple, which bled three or four weeks in spite of plugging, caustic, &c. There was no history of any male relative having been similarly affected. A sister aged twenty-five years had had four miscarriages and a boy who died at the age of eight months. The patient had a sallow complexion with transparent condition of skin. The conjunctiva was not unusually pale and there was no heart murmur. Tincture of perchloride of iron was applied to the wound of the cheek without much beneficial effect. Finally a silk suture was introduced and proved effectual. Arsenic and tincture of perchloride of iron were given internally and the mouth was frequently washed out with iced Condy's lotion. On July 9th the wound had quite healed. On Nov. 28th, 1895, the patient was readmitted on account of hæmorrhage from a wound of the upper lip inflicted by falling against a frame eight days previously. The hæmorrhage having ceased after admission it was not thought advisable to disturb him. Free hæmorrhage, however, came on in the night, which was controlled by the introduction of a silk suture. On Dec. 23rd the wound had not healed, but was slowly granulating.

[7] Journal of Physiology, 1895, p. 277.
[8] Brit. Med. Jour., vol. ii., 1895, p. 949.
[9] Ibid., vol. i., 1895, p. 294.
[10] Principles and Practice of Medicine, 1895, p. 1047.

Medical Societies.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

Recent Progress in Pathology and Treatment of Diseases of Joints.—Optic Neuritis.

A MEETING of this society was held on April 10th, Mr. ERNEST CLARKE, President, being in the chair.

Mr. HOWARD MARSH read a paper on Recent Progress in Pathology and Treatment of Diseases of Joints, illustrated by specimens. 1. He discussed syphilis as affecting joints, first in children, secondly in adults. As to children, he pointed out that two forms of syphilitic disease occur—viz., a destructive lesion of the growing part of the bone, especially common in early infancy, and a gummatous infiltration of the synovial membrane affecting children between three and nine years of age frequently multiple and often symmetrical. The joint is swollen, but freely movable, which is not the case in tuberculous disease. In adults syphilis produces: (1) a simple synovitis with effusion, readily mistaken for subacute rheumatism, sprain, or commencing tubercle, but yielding readily to potassic iodide; (2) a gummatous infiltration of the sub-synovial tissue similar to Brodie's pulpy degeneration; and (3) a deep serpiginous ulceration of articular cartilage similar to and simultaneous with ulceration of soft parts and of the long bones. The treatment of the two latter groups is necessarily prolonged, and it is especially unsatisfactory in joints and rheumatic subjects. 2. The joint lesions of syringomyelia were then described and specimens shown of both the atrophic and hypertrophic forms. 3. Senile tuberculosis of joints was next discussed and its comparative frequency insisted on. The prognosis of these cases is invariably bad; the older the subject the more rapid is the downward course. 4. A very rare specimen of the effects of repeated hæmorrhages into the joints in Hæmophilia was shown. 5. Finally, Mr. Marsh showed the practical importance as regards treatment of the fact, recently ascertained, that the seat of active tuberculous disease in the joints of children is the growing tissue at the end of the diaphysis, and he urged that in children under twelve exercise is radically wrong, not touching the seat of disease. In these cases rest, begun early and maintained for prolonged periods, gives the best results. It is difficult to induce people to go on long enough. Less than fifteen to eighteen months is a farce. Some patients have been kept in leather splints for seven years to effect a cure. The principle of forcibly straightening the joint is wrong, because it is desirable to avoid interarticular pressure. The leather splints should be fitted to the limb as it is and altered as the limb gradually straightens itself, as it will do when the muscular spasm is relieved.—Mr. POLAND and Dr. TAYLOR spoke.

The PRESIDENT showed a case of Optic Neuritis following Influenza in a girl whose vision was reduced to $\frac{6}{60}$, but under potassic iodide had again become normal (both eyes $\frac{6}{6}$), while the pearly whiteness of the discs originally observed still continued.

LIVERPOOL MEDICAL INSTITUTION.

Ladies' Charity and Lying-in Hospital.—Multiple Wound of the Small Intestine and Penetration of the Gravid Uterus by a Stab.—Operative Treatment of Varicose Veins of the Lower Extremity.

A MEETING of this society was held on April 7th, Dr. WILLIAM MACFIE CAMPBELL, Vice-president, being in the chair.

Mr. MITCHELL BANKS called attention to the recent action of the committee of the Ladies' Charity and Lying-in Hospital which involved the resignation of the entire staff.—The following resolution was proposed by Mr. BANKS, seconded by Dr. CAMERON, and was carried unanimously: "The members of the Medical Institution desire to place on record their firm and unanimous protest against the course recently adopted by the managing committee of the Ladies' Charity and Lying-in Hospital, in endeavouring to place the matron-midwife in a position which practically would have vested in her the medical control of the patients. They consider that, however efficient she may be as a midwife, her want of knowledge in other respects might have caused her to overlook or fail to recognise dangerous incidental complications occurring in the course even of a so called natural labour, the timely treatment of which by a member of the medical staff might have averted serious consequences to the patient. They wish at the same time to convey to the members of the medical staff their high appreciation of the sense of duty and professional honour which actuated them in declining to retain office under conditions to which they themselves could not possibly submit, and which they believed to be detrimental to the best interests of the charity."

Mr. CHAUNCY PUZEY related a case of Multiple Wound of the Small Intestine with Penetration of the Gravid Uterus by a Stab. The patient, aged twenty-eight, came to the Northern Hospital in October, 1895. A loop of bowel was protruding from a small abdominal wound half-way between the pubes and the umbilicus. There were two wounds in this piece of bowel, one completely dividing it and the other cutting it half through. These wounds were closed by continuous Czerny-Lembert sutures. On extending the abdominal wound downwards there was a gush of blood and clots, and a second loop of bowel came out; this had been transfixed by the weapon and presented three wounds—two of the bowel itself and an extensive one of the mesentery—which bled profusely. The arteries being secured, the intestine was clamped above and below the wounded portion with Lane's clamp and nine or ten inches of gut were removed. The divided ends were joined by a Murphy's button (No. 2) and the rent in the mesentery repaired. The intestines were replaced and the abdomen irrigated with hot boracic solution. Dark blood welled up from the pelvis, which was filled with black clot. The incision was enlarged and the clots scooped out with the hands. A wound in the uterus was discovered which admitted two fingers; the divided umbilical cord protruded. The cord was pulled out and cut away. The uterine wound was closed with one thick chromic gut suture. The abdomen was flushed, a large drain-tube inserted, and the wound closed. Four days later the patient miscarried. She ultimately recovered, but the button had not passed. It was now apparently lodged in the sigmoid flexure.—Dr. MACFIE CAMPBELL said that he had seen the patient four days after the operation. There were at this time uterine contractions and a very offensive vaginal discharge. The os was patulous and some placenta presented. This was cleared away, but no fœtus was ever found. He presumed that the fœtus must have escaped through the uterine wound into the abdominal cavity and have been lost in the clots.—Mr. PAUL said he did not share in Mr. Puzey's fear that harm might result from retention of the button. He had used the button in seven cases; four recovered, including an extensive pylorectomy, and three died. In only one case could the button be blamed in the least degree.—Mr. BANKS made some remarks and Mr. PUZEY replied.

Mr. THELWALL THOMAS read a paper on the Operative Treatment of Varicose Veins of the Lower Extremity. He advocated a method of ligature and division of the internal saphena vein just below the saphenous opening. In some cases where a large bunch of varices existed at the inner side of the knee he noticed that there was nearly always a deep communication which necessitated the excision of a small bunch. Other cases could be cured by cutting and tying the external saphena at the lower end of the popliteal space. He read notes of seventeen cases in all of which union by first intention took place. When the limb is carefully bandaged after the operation thrombosis does not occur. In two cases a large varix was present at the saphenous opening; the ligature and division were performed immediately below this. It was astonishing to see old ulcers of the leg heal so rapidly as they did after the operation and not recur even in cases when the ulceration had lasted for years. The paper was illustrated by lantern slides of the patients before and after the operation.—Mr. ROBERT JONES had performed Trendelenburg's operation fifteen times, in some instances excising both internal and external saphena veins. Where ulceration existed the operation materially helped the healing process. The general results of the operation were most favourable. He laid much stress on the after-treatment, more especially the employment of massage in cases where there was brawny swelling due to lymphatic obstruction.—Mr. RUSHTON PARKER and Mr. LARKIN took part in the discussion.—Mr. THOMAS replied.

WIGAN MEDICAL SOCIETY.

Some Recent Advances in Surgery.—Exhibition of Specimens.

AN ordinary meeting of this society was held on April 14th in the board-room of the Royal Albert Edward Infirmary, Mr. C. R. GRAHAM, President, being in the chair.

The PRESIDENT read an exhaustive address on Some Recent Advances in Surgery, reviewing the operations and treatment of middle-ear and intracranial disease, laminectomy in injuries to the spine, cholecystotomy, resection of the intestines, operations for appendicitis, &c., and concluded with some remarks on the new photography and Roentgen's rays. An interesting discussion then followed.

The following cases and specimens were shown :—

Dr. MILROY: Patient suffering from Elephantiasis of Both Legs. Specimens of (1) Encephaloid Cancer of the Gall-bladder and Spigelian Lobe of the Liver; and (2) Fracture of the Body of the Third Cervical Vertebra with Hæmorrhage into the Cord caused by Indirect Violence in a Young Man; death in twenty-four hours.

Mr. BERRY: (1) Ununited Fracture (transverse) Wired with an excellent result; (2) Compound Fracture of the Elbow-joint; and (3) Triple Osteotomy (both femora and one tibia) in a child aged three years.

Mr. COWAN: Compound Depressed Fracture of the Skull in which he had trephined in three places. The patient was nearly well.

Mr. HUGH E. JONES: (1) Coloboma Iridis; (2) Choroiditis Senilis; and (3) Ophthalmic Demonstration of several cases.

Mr. MACDONALD: (1) Hydatid of Liver; and (2) Uric Acid Calculus from a Boy aged two years which weighed 134 grains.

Mr. WM. MITCHELL ROOCROFT: Mulberry Calculus removed from a Boy aged ten years which weighed 220 grains.

The PRESIDENT: Fifty-two Biliary Calculi removed by Cholecystotomy.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on April 14th, Dr ADOLPH BRONNER, President, being in the chair.

Dr. S. LODGE gave a demonstration of Micro-specimens illustrating Pathological Conditions of the Nose, Throat, Mouth, and Orbit.—Dr. GOYDER and Dr. HIME discussed the specimens.

Dr. H. BRONNER showed a patient who had recently suffered from Tetanus and whom he had treated with injections of antitoxin. Recovery was complete. The patient was a woman who was admitted into the Bradford Infirmary suffering from trismus. There were no stiffness of the muscles of the neck and no dysphagia. The knee-jerks were present. The pulse was 92, the respiration 24, and the temperature 100° F. Fifteen grains of antitoxin were injected and 20 grains of chloral hydrate and of bromide of potassium were given by the mouth. The patient had a spasmodic attack twenty-four hours after admission. At intervals 40 grains (followed by doses of 20 grains and 15 grains) of antitoxin were injected and there were further spasms of the neck and jaw noted. On the tenth day (after admission) pain in the back and legs was complained of; around the left knee-joint there was a roseolar rash, and the left wrist and shoulder were swollen and tender. There was a sore throat and the temperature was 104°. The after progress of the case was one of gradual improvement. Two abscesses in the back required to be incised and drained. The mode of action and the method of administration of the antitoxin were described.—The case was discussed by Dr. GOYDER, Dr. FARRAR, Mr. GABRIEL, Mr. HORROCKS, Dr. HIME, and Dr. CAMPBELL, and Dr. H. BRONNER replied.

Dr. J. HAMILTON CRAWFORD showed a man suffering from Idiopathic Muscular Atrophy.

Dr. FARRAR showed a Skiagraph of the Hand which disclosed a piece of Steel near the second Phalanx of the Little Finger, and described the apparatus necessary for the new photography.—Mr. PARKINSON, Dr. CAMPBELL, and Dr. GOYDER spoke on the subject and Dr. FARRAR replied.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on April 17th, Dr. NEWMAN being in the chair.

Dr. R. M. BUCHANAN showed specimens from a case of Cancer of the Pylorus. The special feature of the case was provided by the secondary distribution of the malignant elements. This had occurred widely in the lymphatic glands in various parts of the body and some of the glands were observed to have undergone caseous changes—an unusual circumstance in malignant growths. The peritoneum, pericardium, and right pleura were dotted over with a large number of minute secondary malignant formations, though no symptoms during life had suggested the involvement of these serous membranes.

Dr. WALKER DOWNIE related eight consecutive cases in which he had opened the larynx (crico-thyrotomy) for the purpose of removing Intra-laryngeal Tumours and showed several of the patients. The series included only one death, that of an adult who was the subject of a chronic lung affection and who died from septic pneumonia. The most noteworthy of the other cases were:—1. An adult from whom the left vocal cord was excised three and a half years ago on account of malignant disease and who had now a somewhat rough but distinct voice; in phonating the right cord would be seen to cross the middle line and rise up to meet the left ventricular band, which acted, therefore, as a substitute for the vocal cord. The disease had not recurred. 2. A boy aged five years on whom it was necessary to perform Tracheotomy for Attacks of Dyspnœa, one of which reduced the patient to a state of coma. The laryngoscope failed to detect any new growths, but on performance of crico-thyrotomy a small mucous polypus was seen to spring by a long pedicle from the tracheal wall about the level of the second ring, and the length of the pedicle was such as to allow the tumour to irritate the laryngeal mucous membrane and so lead to spasm of the glottis. The removal of the polypus was followed by complete cessation of the symptoms. 3. A child two years of age on whom Crico-thyrotomy had been performed six times for recurring papillomata. Dr. Downie expressed his conviction that growths within the larynx are much more satisfactorily dealt with by crico-thyrotomy than by an endo-laryngeal operation. He regards the operation as an eminently safe one and has had no trouble with subsequent malposition of the cartilages leading to aphonia. In order to secure accurate readjustment he is in the habit of making the incision in the thyroid cartilage, not in the middle line in its whole length, but commencing obliquely in one ala he reaches the middle line, continues downwards, and then completes the division obliquely in the other ala. Then when the divided parts are replaced they dovetail into one another and so accuracy of apposition is secured. For malignant growths Dr. Downie considers an endo-laryngeal operation quite unsuitable. Such growths are almost invariably larger and more widely extended than appears in examination by the laryngoscope, and they cannot be properly attacked unless by an operation which renders complete access to them possible. The patient who had now been free from any sign of recurrence for three and a half years after extirpation of the vocal cord for epithelioma illustrated the advantage of operating thoroughly and in an early stage of the disease.—Dr. NEWMAN agreed generally with Dr. Downie's views with regard to the crico-thyrotomy as compared with an endo-laryngeal operation. He quoted a case in which he had extirpated both vocal cords for malignant disease six years ago and in which there had been no recurrence. His experience had led him to the conviction that early operation in malignant disease offered a very good chance of complete cure, whilst when the disease had advanced to such a point that complete extirpation of the larynx was necessary it was almost as well to refuse to operate; one of his cases, however, had survived the operation for eighteen months.

Dr. J. H. TEACHER showed two patients illustrating the value of Skin Grafting in Promoting the Healing of Extensive

Wounds. In one the wound had been caused by the excision of a large part of the skin of the thigh on account of numerous small sarcomatous growths and the other was due to an accident. In each case it had been found that whilst epithelial grafts give rapidly a covering layer to the granulations this covering is thin and nothing like so permanently valuable as that provided by whole-skin grafts. Photographs representing the various stages of the healing process were exhibited.

Dr. NEWMAN showed specimens from a case of Malignant Disease of the Œsophagus which had terminated fatally in consequence of the ulcerative process extending into the aorta. The stricture had been recognised during life, the growth not only producing dysphagia, but also paralysis of the left vocal cord. Gastrostomy was successfully performed and for fourteen days progress was quite satisfactory. Then blood began to pass from the opening in the stomach and in the end death occurred suddenly from a severe hæmorrhage. The opening into the aorta was situated in the descending arch.—Dr. HAWTHORNE, in discussing the case, referred to the rarity of the mode of death in malignant disease of the œsophagus, and directed attention to a very similar case under the care of Dr. Frederick Taylor, reported in THE LANCET of April 11th 1896, p. 991.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

The Radical Cure of Inguinal Hernia.—Restoration of the Nose.

A MEETING of this section was held on March 20th, Sir W. THORNLEY STOKER, President, being in the chair.

Mr. HEUSTON read a paper on the Radical Cure of Inguinal Hernia, in the course of which he said that as hernia gave rise to a general weakening of the fascia transversalis in the inguinal region it was necessary in any operation aiming at radical cure to support and strengthen this fascia, and the most frequent cause of recurrence after some of the recent operations was neglect of this point. He then mentioned some of the operations now generally recommended, dividing them into those where the inguinal canal is not opened and those where the inguinal canal is opened; the results of the second variety were very good as it was possible to see which structure required most attention, but he feared that after a time recurrence would be likely to occur through absorption of cicatricial tissue. He then described an operation which he had himself performed on thirty-two occasions, the patients varying in age between eighteen months and fifty-two years; all of the patients recovered, and, as far as he could ascertain, the hernia had not recurred in any. This operation consisted in exposing the inguinal canal, separating the sac from the cord to its full extent, twisting the neck of the sac and ligaturing it by a Staffordshire knot with strong gut at its exit from the external abdominal ring, then suturing the twisted neck of the sac to the posterior and superior walls of the canal in such a manner as to approximate those walls and cause the twisted sac to become united to the posterior wall and fascia transversalis, thus hindering a recurrence through any portion of the posterior wall of the inguinal canal. He uses catgut sutures throughout the operation, and depends on inflammatory adhesions to hinder recurrence.

Mr. ROBERT H. WOODS read a paper on a Modification of the Indian Operation for Restoration of the Nose. The patient, a female aged twenty-nine years, had had the cartilaginous nose destroyed by lupus. The forehead flap was cut according to Dieffenbach's pattern. The skin from the bridge of the nose was detached and reflected downwards so that the raw surface looked forwards and the skin backwards towards the nasal cavity, the raw surface of this triangle was adapted to that of the forehead flap, and so formed a portion of the skin lining the new nose. The lining was completed by the flaps inverted to form the alæ, so that the whole new nose was lined with skin, and the tendency to contraction which is always present where a surface is left to granulate and cicatrise was obviated. The forehead surface was not sutured but was covered by a flap of skin, transplanted from the arm as in Wolfe's method. This flap perfectly covered the deficiency; it was absolutely wanting in sensibility. There was no secretion from the nose.

Reviews and Notices of Books.

Dictionary of National Biography. Vol. XLVI. Pocock—Puckering. Edited by SIDNEY LEE. London: Smith, Elder, and Co. 1896. Price 15*s*.

THIS volume contains upwards of 450 articles, the most noteworthy of which are probably those on Alexander Pope and Joseph Priestley. Mr. Leslie Stephen, to whom we are indebted for the biography of Pope, says of him that "he had qualities which would have enabled him to give an adequate embodiment in verse of the spirit of any generation into which he had been born. He might have rivalled Chaucer in one century and Wordsworth in another." The poet was a remarkable example of the association of great mental endowments with bodily infirmity, being of weakly constitution, greatly deformed, and only about four and a half feet in stature. He was born in Lombard-street in the City of London in 1688, died in 1744, and was buried in Twickenham Church. The versatility of Priestley's genius is sufficiently attested by the fact that the writing of his biography has been divided between two authors—Mr. Hartog undertaking the scientific and the Rev. Alexander Gordon the theological and political survey of his work. His discovery of oxygen gas was made on Aug. 1st, 1774, and was first publicly announced in a letter to Sir John Pringle dated March 15th, 1775. Scheele made the same discovery independently, but did not publish his results until a later date. Priestley also was the first to prepare seven other gases—namely, hydrochloric acid gas, nitric oxide, nitrous oxide, ammonia gas, carbonic oxide, sulphur dioxide, and silicon tetrafluoride. He and Professor Rutherford of Edinburgh simultaneously and independently discovered nitrogen in 1772. Priestley was born in Yorkshire in 1733, went to America in 1794, and died in 1804 at Northumberland in Pennsylvania.

The medical biographies are about twenty-four in number. Sir Francis Prujean was born at Bury St. Edmunds in 1593 and graduated as M.D. at Cambridge University in 1625. He was elected a Fellow of the Royal College of Physicians of London in 1626, was censor for several years, registrar from 1641 to 1647, president from 1650 to 1654, and treasurer from 1655 to 1663. He was knighted in 1661 and died in 1666. Prujean-square, a small passage leading off the Old Bailey, is named after him. Richard Powell was born in 1767, and graduated as M.D. at Oxford University in 1795. He was elected a Fellow of the Royal College of Physicians of London in 1796, was censor for several years, Gulstonian Lecturer in 1799, Harveian Orator in 1808, and Lumleian Lecturer from 1811 to 1822. In his Gulstonian lectures he mentioned the fact, up to that time unrecorded in this country, that impaction of biliary calculi in the gall-bladder does not necessarily cause serious symptoms. Dr Powell was physician to St. Bartholomew's Hospital from 1801 to 1824 and was the first to print the whole text of the ancient charter granted to the hospital in the year 1137. He died in 1834. Sir John Pringle was the youngest son of a Roxburghshire baronet and was born in 1707. He studied medicine at Leyden, where he graduated as M.D. in 1730, and after some years of practice in Edinburgh he received in 1742 a hospital appointment with the British forces in Flanders. In 1744 he was made physician-general to the forces there, and in 1745 was present with the Duke of Cumberland at the battle of Culloden in Scotland, subsequently returning for two years to the army serving on the Continent. About 1748 he settled in London, still holding his appointment of physician to the forces, and rapidly attained professional distinction, being made physician to the Duke of Cumberland in 1749, to the Queen in 1761, and to the King in 1774. In 1763 he was elected a

Fellow of the Royal College of Physicians of London, in 1766 he was created a baronet, and in 1772 he became President of the Royal Society. He died in London in 1782. Pringle's writings and practical work did much for the advancement of military hygiene; his biographer (Dr. J. F. Payne) says that "he may fairly be regarded as the founder of modern military medicine in distinction from surgery." Percivall Pott was born in Threadneedle-street in 1714, and was admitted into the freedom of the Barber-Surgeons' Company in 1736. The union of the Surgeons and Barbers came to an end in 1745, and in 1753 Pott and John Hunter were elected the first Lecturers on Anatomy to the newly-formed Corporation of Surgeons. He became Assistant Surgeon to St. Bartholomew's Hospital in 1744, and was full Surgeon from 1749 to 1787, during which long period of active service he made many improvements in practical surgery. He was also the author of many celebrated treatises, the chief of which are those on Ruptures, on Fistula in Ano, on Injuries of the Head, on Fractures and Dislocations, on Curvature of the Spine with Palsy of the Lower Limbs, and his "Chirurgical Observations." The term "Pott's fracture" originated in his having himself sustained that injury in 1756 through being thrown from his horse. His practice was very large and the lectures delivered by him to the students of St. Bartholomew's Hospital were the most celebrated in London. He died in 1788. Sir George Hornidge Porter was born in Dublin in 1822, being the only son of Mr. William Porter, a distinguished Dublin surgeon, who was Professor of Surgery in the Irish College of Surgeons School of Medicine and filled the office of President of the College in 1838. Having studied medicine in his native city and become a Fellow of the Royal College of Surgeons in Ireland in 1844, he graduated as M.B. at Trinity College, Dublin, in 1845 and in 1849 was elected surgeon to the Meath Hospital, in the duties of which appointment he continued to be actively engaged for the remainder of his life. In 1865 he received the degree of M.D. from Trinity College, Dublin; in 1863 he was elected President of the Royal College of Surgeons in Ireland; in 1869 he was appointed surgeon-in-ordinary to the Queen in Ireland; in 1883 he was knighted, and in 1889 he received a baronetcy in recognition of his distinguished position as a surgeon. His literary work consists of numerous records of surgical cases and operations published in the periodical press. He died in 1895. Sir James Prior was born at Lisburn about 1790, entered the Navy in 1810, and became surgeon to three of the Royal yachts in 1815. In 1843 he was created deputy-inspector of hospitals, received knighthood in 1858, and died at Brighton in 1869. He had a considerable literary reputation, having published a memoir of Edmund Burke, which appeared in 1824 and passed through several editions, as well as some poetical pieces, a life of Oliver Goldsmith, and an edition of Goldsmith's miscellaneous works. John Postgate was born in Scarborough in 1820, took the diploma of the Royal College of Surgeons of England in 1844, settled in practice in Birmingham in 1851, became a Fellow of the College of Surgeons in 1857, and acquired a well-deserved prominence by his labours for the exposure and repression of the adulteration of food. Under his influence nine Bills were introduced into the House of Commons by the members for Birmingham. Postgate obtained no public recognition of any kind for his services. He was appointed professor of medical jurisprudence in Queen's College, Birmingham, in 1860, and died in 1881.

Sewerage and Sewage Disposal. By HENRY ROBINSON, M. Inst. C.E. London: E. and F. N. Spon. 1896.

PROFESSOR ROBINSON'S book deals with a most important subject upon which he is an accepted authority. It is disappointing, however, not to find in it any indication of a promise of the solution of the problem of really utilising sewage. It is, of course, an important thing to be able to purify sewage or to dispose of it in a sanitary way, but it would be far more satisfactory if it could be turned to useful account rather than be left with the chance of polluting watercourses, or in the form of sewage cake to go begging for want of a purchaser or even of an individual to take it away gratis in any quantity he pleases. Chemical treatment and precipitation have accomplished a good deal in effecting the purification of our rivers and in having a marked favourable influence on the public health, for which we are thankful, but the process in its entirety is not scientific. Mainly through the admirable researches of the Massachusetts Board of Health, and of the experiments of Mr. Scott Moncrieff, we are beginning to suspect that with a due study of the conditions we shall be enabled soon to "engineer" organisms so as not only to dispose of sewage but to convert it into an innocuous and a highly valuable agricultural product. Nature knows no waste, and we have only to patiently wrest her mystic plans of action from her to effect the same end. Professor Robinson's book is admittedly a summary of important data connected with water-supply, sewerage, and sewage disposal, and it places in the hands of the engineer many valuable facts that he should be in possession of. The first chapter relates to house drainage and is followed by memoranda relating to sewage, and then by a section on sewage generally, and the question of the formula of flow, &c. The chapter on river pollution is excellent, as is also the section on precipitation dealing with the more important methods in use. Included under this heading are the electrical method of Webster, which depends largely upon the formation of iron salt by electrolysis acting upon and precipitating the sewage matters, and the Hermite process. We find no reference to THE LANCET report[1] upon the latter process, which we believe was more exhaustive than any other report, giving as it did full details bearing on its chemical and bacteriological aspect. Filtration, in which the claims of the Scott Moncrieff method are epitomised, but not to any extent criticised, is then dealt with. The volume concludes with a diagram giving at a glance the discharges and velocities of oval and circular sewers.

LIBRARY TABLE.

Elementary Inorganic Chemistry. By A. HUMBOLDT SEXTON, F.I.C., F.C.S. Fourth Edition, revised and considerably enlarged. London: Blackie and Son. 1895. Price 2*s.* 6*d.* — Though we deprecate the publication of books written almost exclusively for purposes of examination we are pleased to find that the small work before us has arrived at the stage of a fourth edition. Despite the fact that it is adapted to the wants of students preparing for the Science and Art examination and the London Matriculation, it is a sound exposition of the facts and the general principles of chemical science. It is an excellent chemical primer, due and equal emphasis being given to theory and practice and a proper importance to the physical aspect of the changes in matter. The treatment of the subject is scientific although simple, and it is this feature which singles out this elementary work from a shoal of others which have no real *raison d'être*.

Hygiene. By Professor J. LANE NOTTER, M.D. Dub., and Surgeon-Major R. H. FIRTH, F.R.C.S. Eng. Second Edition. Longmans, Green, and Co. 1895.—The rapid exhaustion of the first edition of this work has necessitated the issue of a second edition within only a few months of publication.

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[1] THE LANCET, May 26th, 1894.

Expansion and growth are the natural conditions of manuals when re-issued, but we are glad to see that the authors have not added much to the bulk of their new volume. The new material which has been added is chiefly to be found in the chapter on the "Removal and Disposal of Refuse and Excreta," which has been almost re-written and much improved on, and in the entirely new chapter on "Sanitary Law." This new chapter we welcome as a great addition to the work; in it is clearly set forth all that should be known or might be required by the head of a household; in place of analysing each Sanitary Act separately the general effect of legislation as a whole upon certain matters of sanitary importance is considered, the summary being limited to the law as applicable to England and Wales.

New Inventions.

VEHICLES FOR THE USE OF MEDICAL PRACTITIONERS.

CARRIAGE-BUILDING has of recent years undergone several improvements, and some novel features have been introduced, designed chiefly either to reduce the weight of the vehicles or to render them more comfortable and commodious in use. These various desiderata appear to have been carefully and successfully studied by the Cortland Wagon Company of Henrietta-street, Covent-garden, and it may be useful to direct attention to a few styles of vehicle which seem to possess qualities likely to be serviceable to medical men. The Henrietta Gig or Car (Fig. 1)

FIG. 1.

weighs about 2¼ cwt., and is suitable for a horse standing from 14 hands to 15½ hands. It has elliptic springs, hickory wheels 4 ft. high provided with steel tyres, and from its lightness and strength is well adapted for long journeys over unfavourable roads. It is well finished and cushioned, and carries either one or two persons.

The Bombay Cart is slightly heavier than the foregoing. It carries two in front, and if required can be fitted with a Syce's seat in the rear suitable for use in India, as well as with a pole when a pair of horses are to be driven.

To those who desire increased protection in winter weather, or against wind, sun, and rain, the four-wheeled hooded carriages (Fig 2) offer many advantages. They are seated for two persons, may be drawn by either one horse or a pair, and have ample space for instrument bags and similar requisites. The hoods fold up and can be opened or closed at will; the spaces at the back and side are filled by leather curtains.

The Cortland Stanhope Phaeton is a somewhat larger style of four-wheeled carriage, carrying two in front and two behind. This phaeton may be driven with either one horse or a pair, in which latter case a pole is supplied. It is very light in draught and turns in a small space.

The Cortland Bellamy Trap is a four-wheeled carriage constructed to carry a party of four, but the back seat may

FIG. 2.

be folded up when not in use. Either one horse or a pair may be driven in it.

In all these vehicles the excellence of the materials is guaranteed, and the execution of needful repairs is facilitated by interchangeable parts being kept in stock. When required any carriage can be fitted with indiarubber tyres, either solid, as commonly used for hansom cabs, or pneumatic. American harness is supplied to purchasers who prefer it; it differs in some respects from the English patterns, the bearing reins in particular being less irksome to the horses.

THE "ELLISON" BREAST BANDAGE.

WE have received from Messrs. W. H. Bailey and Son, 38, Oxford-street, W., a little appliance which we can conceive might be of considerable practical use in many circumstances. It is a form of breast bandage consisting of a waistband of strong linen and braces of the same material made to cross at the back just above the lumbar region and in front at about the junction of the superior and middle portions of the sternum. The accompanying illustration shows that the front of the braces are expanded on either side into shallow linen bags, which will receive the respective breast and support it in any direction and with any required amount of tightness, according as the straps upon the collar-bone are adjusted. Pressure can of course be regulated and applied in this or that direction by the insertion of pads within the bags. The bandage may also be used for securing dressings or poultices, when it will obviate unnecessary moving of the patient. It is made in three sizes, small, medium, and large, and the price is 5*s*. 6*d*.

A LITMUS PENCIL.

LITMUS is an admirable indicator of acids and alkalies, but for this purpose can only be relied upon when pure. Its preparation in a pure state is not easy and involves a series of operations which take an inconveniently long time. The litmus pencil provides us at once with the pure colouring material in a very convenient form for use. Thus by merely tracing a piece of paper with the pencil a mark is obtained which we find is extremely sensitive to minute quantities of acids and alkalies, according, of course, as to whether the blue or the red end of the pencil has been used. For the practitioner in testing, for example, the reaction of urine it will be invaluable because reliable, and the indication it gives is distinct. The specimen was sent to us by Messrs. T. Christy and Co. of 25, Lime-street, E.C.

THE LANCET.

LONDON: SATURDAY, APRIL 25, 1896.

THE question of midwifery attendance on women whose position in life is just above that of paupers is becoming more simple, and the parties that have been ranged on opposite sides of the controversy are now finding out—as some have seen all through—that the differences between them are not great. As the discussion has proceeded the objects to be aimed at and the dangers to be averted are more clearly seen. Both are very real, as we shall try to show, and both place the profession in a delicate and responsible position, in which the help of practitioners in every grade of practice is needed. We have said that the objects to be aimed at and the dangers to be averted are very real. The great object is the saving of hundreds or thousands of lives of parturient women lost yearly through the ignorance of midwives. Dr. W. FRASER in his scheme[1] says that from 1871 to 1893 no less than 98,856 mothers died in England and Wales, or 4493 per year, from puerperal fever and the accidents of childbirth. As Dr. FRASER says, such a fact as this occurring in the antiseptic period of history may well cause searchings of heart. At a meeting lately held in Sheffield this mortality was attributed more to accidents than to puerperal fever, and rather to the want of skilled assistance than to the poisoning of patients by careless and ignorant attendants. This is, however, very doubtful. The serious matter is that while deaths from puerperal accidents are becoming fewer, the death-rate from puerperal fever is rising. Dr. BOXALL has shown that, in the provinces of England at least, while the death-rate from accidents of childbirth has diminished the death-rate from puerperal fever has considerably increased. We do not say that all the blame rests with ignorant midwives. It is enough to know that their ignorance must entail such consequences. Dr. W. WILLIAMS has shown[2] that in Wales the death-rate from puerperal fever is increasing, and he says that the prevalence of the infection in the thickly peopled mining valleys is to a very great extent due to the general employment of ignorant midwives. It is computed that 450,000 women are delivered annually by midwives, most of these midwives being quite untrained. It requires no effort of the imagination to picture the disadvantage and the disaster that such a fact implies. It is ascertained that a little training of midwives, with the opportunity of easy reference to a medical practitioner, vastly reduces the mortality of those whom they attend. This point need not be urged. Though labour be a natural process it leaves the woman a ready prey to the attacks of the most deadly microbes. The object of all enlightened and humane people, medical or lay, must be to reduce to a minimum the risks of the 450,000 women who, as a matter of fact, are attended mostly by ignorant midwives.

How can this object be attained? The best way would be to secure for all women the attendance of fully qualified medical practitioners. There are reformers in this matter, such as Dr. RENTOUL, whose suggestion is attendance by medical practitioners—male or female—and they say that there are registered practitioners of medicine, who, after six or eight years spent in general education, five in medical study, and a series of severe examinations, will be content to take these hundreds of thousands of cases at a charge of 7*s.* 6*d.* for each case. We neither believe this nor desire it. We should despair of our profession if medical men had to do the drudgery of 7*s.* 6*d.* midwifery. But though we see no chance of medical men taking the midwifery of mere midwives into their direct care, we fully appreciate both the necessity and the practicability of placing the midwife in such a relation to the medical practitioner that he shall be available in every emergency. Every Midwives Bill supposes this. Dr. RENTOUL requires the midwifery nurses whom he is willing to register to act under the immediate supervision (does this mean in the presence?) of a medical practitioner. We think, with the Lancashire and Cheshire Branch of the British Medical Association, that such an arrangement is impracticable. It would be as exacting to the practitioner as if he had no midwifery nurse, and two fees would have to be paid by the patient. Another way out of the difficulty is to throw the cost of the midwifery of the classes we are considering on the Poor-rate and to give them the benefit of the attendance of the Poor-law medical officer. This course is open to the formidable objection that it pauperises the patients. Accordingly the great majority of persons who have considered this subject have come to the conclusion that the obstetric needs of the classes just above pauperism constitute an exceptional problem which must be met in an exceptional way. The women cannot be allowed to die in childbirth because they cannot pay the minimum fees of medical men—which, in all conscience, are small enough at present. Consequently all Bills provide for a class of women to act as midwives or midwifery nurses, who will have a certain amount of training as to the management of ordinary labour and the hygiene of the lying-in room and will be instructed as nurses in the risks of the lying-in periods. This insistance on the nursing duties of the midwife is a chief feature of the Bills which we referred to last week as being likely to compete in Parliament with the Midwives Bill. What is wanted is a class of women who will do *both* duties as at present. It is obvious that the lying-in woman is as much at the mercy of the nurse as of the midwife, who in the poor woman's case are one and the same person. Ignorant or dirty nurses will do all the mischief of ignorant or dirty midwives. It is no use to save women from one and not the other risk.

> "What boots it at one gate to make defence
> And at another to let in the foe?"

It is to the credit of the Lancashire and Cheshire Branch that it emphasises very specifically the nursing function of the midwife. It will be the duty of the suggested Midwives Board to lay down rules for the training of the midwife, for her examination, and for limiting her to normal cases.

We have not space to-day to go minutely into the rival merits of the different Bills and of the clauses which

[1] THE LANCET, Feb. 29th, 1896.
[2] THE LANCET, April 18th, 1896, p. 1067.

are meant to avert the risks of this legislation. The greatest risk which it behoves us to avert is that of doing anything to detach midwifery from the science and art of medicine. It is only since midwifery has come to be studied in this relation that it has achieved its great improvements in saving life alike from accidents and from infections. It is of no use to argue that the results of midwives' practice in lying-in hospitals and charities afford proof of the propriety of giving them sole charge of lying-in women. The argument is utterly fallacious. In this connexion they are the mere handmaids and nurses of medical practitioners. And the test of safe legislation is the degree in which it ensures that the women who are to be registered as midwives and midwifery nurses shall continue to occupy the same relative position. The important letter of Mr. HUMPHREYS, which we print in another place to-day, shows that on some essential points there is a difference between the General Medical Council and the Privy Council. It is satisfactory to know that the promoters of the Midwives Bill sympathise with the General Medical Council and disapprove the action of the Privy Council or of the House of Lords in not accepting the suggestions of the General Medical Council which has a great responsibility in this matter. Some teachers of midwifery would seem to add very much to the difficulty of procuring reasonable legislation on this subject by rash statements. Dr. W. C. GRIGG is reported by Dr. RENTOUL as saying to his pupil midwives: "I am sure you will agree with me in hoping the day is not far distant when all midwifery will again fall into the hands of women." We cannot help thinking that Dr. GRIGG has been misreported. Surely he does not wish for so retrograde and disastrous a change as seems to be implied in this remark.

FOR months to come the Dongola expedition and the forward movement in the Soudan will be of absorbing interest, and already the arguments for and against this latest departure in our Egyptian policy are being stated and restated with conspicuous ability on either side. It is not within our province to criticise or defend that policy, but as medical journalists concerned in the future even more than in the immediate present of a great health resort for the English-speaking world we have a view of our own which is not without its interest even for the diplomatist and the military man. There are, indeed, two causes in Egypt—a sanitary and social work on the one hand, and a political and imperial one on the other; and while the latter is receiving an attention which no patriotic or far-sighted Englishman will grudge, the former is for the time being lost sight of, if not wholly relegated to the background.

No one can have followed our Cairo correspondence for the last few years without vividly realising two facts—to wit, that Egypt, particularly the upper reaches of the Nile, is becoming steadily an important factor in the resources of medicine—an aid to treatment which the English consultant has more and more to consider in the interests of patients; and, secondly, that the sanitary conditions of the country are very far from keeping pace with the influx of the ailing or the weakly in quest of warmth and pure air. In Cairo itself—which in the winter months has been not inaptly described as "almost a suburb of London," so full is it of our compatriots—the death-rate is at least three times as high as in either the English or the Scottish capital. It is, in the words of a recent reporter on its sanitation, "absolutely destitute of any drainage or sewage system," and on certain days when the wind blows, there being little or no rain to cleanse the streets, "the analysis of the air would yield results which ought to terrify the Government into sanitation." The condition of the towns further up the Nile is even worse, their defect in wholesome potable water being a byword. This is one, though by no means the only, cause why their native children die in such appalling numbers—"two-thirds of them before they are five"!—and it is a cause which cannot but affect disastrously the health of even the well-fed, well-cared-for sojourner from the British Isles. True, efforts are being made to remedy this defect by boring, and just as at Biskra, in the Sahara, artesian wells now supply the English-speaking resident with water he can drink with safety, so in Egypt the adoption of similar measures has already begun and nothing but a sufficient money grant is required in this, as in other departments of public hygiene, to make the country habitable by the stranger and healthy for the native.

But it is at this point that the sanitary and social cause for which we have been pleading comes into conflict with the political and imperial. The forward movement in the Soudan threatens to assume proportions which will drain the country of its resources for years to come and may throw back public hygiene for a decade and more. Relying for her prosperity as she does on "the foreign import," as the health-seeking sojourner is somewhat cynically called, Egypt is in danger of losing this source of income and with it the means of promoting that sanitary reform which is year by year becoming more indispensable for her as a climatic resort. Three millions sterling is the estimated amount of what Great Britain alone contributes annually through her visiting population to the Egyptian Exchequer, and this contribution will continue so long as the country attracts the health-seeker, but not a day beyond. Once let it be found that infective disease, the Nemesis of backward sanitation, endangers the English resident or neutralises the benefits he looks for and the stream of pecuniary gain which is to Cairo and the Nile towns what the fertilising flood is to Lower Egypt itself will be deflected into other channels, and places like Biskra will thrive at Egypt's expense and rectify their sanitary frontier, and with it the monetary one, in a sense which will make the contemplated "rectification" at Dongola or Khartoum a costlier one than its promotors bargained for.

There are, in fact, two conquests as well as two causes to be provided for in Egypt. There is the political and imperial conquest, into which we have now entered and of which we are far from seeing the end, and there is the sanitary and social conquest, barely begun but giving promise of success—in danger, however, of being compromised, if not suspended altogether, by its more dominating counterpart. As we have said, we have no wish to attack or vindicate the "forward policy" now in course of being carried out. We leave that to our political contemporaries. But our duty as medical

journalists would not have been fulfilled if, amid the arguments for and against that policy, we had failed to put in a word for the sanitary and the social crusade on which we have started. *Sanitas sanitatum, omnia sanitas* was once a political watchword. It is worth while recalling it now when it is apt to be forgotten in one of the chief health resorts of the English-speaking world.

THE death of Dr. WILLIAM SHARP of Rugby, recorded in our columns last week, removes one of the last of the holders of a medical degree conferred by the Archbishop of CANTERBURY and registered under the Medical Act. Although the obtaining of a medical qualification in this unconventional way is altogether at variance with modern views as to expediency and the fitness of things, it is nevertheless a time-honoured usage almost contemporaneous in its inception with the Royal College of Physicians of London and fully sanctioned by Act of Parliament. It was the rejection of the POPE'S domination by King HENRY VIII. which led to the English Primates being invested with the power of conferring distinctions which we of the present day consider to be the exclusive prerogative of a university. The granting of degrees in divinity, law, and medicine appears to have been exercised by the Popes independently of the universities, and the abolition of the Papal authority in this country by King HENRY would, therefore, involve some inconvenience to such of his subjects as had expected to receive the coveted titles through the instrumentality of the Church. This disability was, however, easily removed by the Act 25 HENRY VIII., c. 21, which is entitled "An Act concerning the Exoneration of the King's Subjects from Exactions and Impositions heretofore paid to the See of Rome, and for having Licences and Dispensations within this Realm without suing further for the same." Section 2 provides that the Archbishop of CANTERBURY shall have power to grant "all manner such licences, dispensations, compositions, faculties, grants, receipts, delegacies, instruments, and all other writings for causes not being contrary or repugnant to the Holy Scriptures and laws of GOD, as heretofore hath been used and accustomed to be had and obtained by your Highness or any of your most noble progenitors, or any of your or their subjects at the See of Rome." Degrees are not specified in this transfer of authority, but they are understood to be included in the term "faculties." The right of conferring degrees was exercised by Archbishop CRANMER as early as 1539, in which year he commissioned the Bishop of NORWICH to confer the degree of Doctor of Divinity on ELIGIUS FERRERS. Only seven examples are known of Lambeth degrees granted prior to the Restoration—namely, one of D.D., four of B.D., one of M.A., and one of *ad eundem* B.A. After the Restoration in 1660 Archbishop JUXON (1660-63) bestowed degrees six times—D.D. twice, LL.B., M.A., M.D., and M.B. once each. His successors continued the practice, and the right of doing so—which was conferred, or presumed to be conferred, by Parliament under HENRY VIII.—was exercised by the Archbishops apparently without objection until in the reign of GEORGE I. it was disputed and made the subject of a law suit in consequence of the Bishop of CHESTER having refused to admit SAMUEL PEPLOE, a B.D. of Lambeth, to the wardenship of Manchester College. The cause was first tried at Lancaster Assizes in 1722 and was subsequently carried by appeal before the King's Bench, where it was decided in favour of the Archbishop in 1725. From the decease of Archbishop JUXON in 1663 to Feb. 1st, 1848, there were 451 Lambeth (or Cantuar.) graduates, namely:—D.D., 169; B.D., 11; LL.D., 24; LL.B., 41; M.A., 170; M.D., 31; M.B., 1; and Mus.Doc., 4. The solitary M.B. was PETER DENT, of Trinity College, Cambridge, who received the M.B. degree in 1678, and was incorporated at Cambridge in 1681. To the above list of graduates may be added the name of Mr. JOSEPH BRIGSTOCKE SHEPPARD, M.R.C.S. and L.S.A., of Canterbury, who was made LL.D. Cantuar. in 1885. This gentleman was seneschal of Canterbury Cathedral and was for many years distinguished as an archæologist; he died in January, 1895.

The Medical Act of 1858 recognised the Lambeth medical degrees to the extent that Section 15 and Schedule (A) provide for the registration of such degrees if granted prior to the passing of the Act, and the London and Provincial Medical Directory in the annual issues from 1848 to 1856 inclusive, but apparently not afterwards, at the end of the list of the "Institutions granting Degrees" had the paragraph:—"In addition to these the Archbishop of CANTERBURY is empowered to authorise any person whom he may deem fit to practise as a physician, by virtue of the Lambeth Diploma." The following is a complete list of the Lambeth Doctors of Medicine, together with the year of graduation, from the beginning of the present century to 1862. The other qualifications of each of these gentlemen, as far as they can be clearly ascertained, are placed within parentheses after the respective names:—In 1803, ROBERT POPE; in 1806, THOMAS DAY; in 1817, WHITLOCK NICOLL (M.R.C.S. Eng., 1809; L.R.C.P. Lond., 1816; M.D. Aberd., 1816; M.D. Glasg., 1826); in 1818, JOHN DAY; in 1819, CARR ELLISON LUCAS; in 1822, WILLIAM OLIVER LOCKE; in 1824, JAMES RUMSEY; in 1825, DANIEL JARVIS; in 1826, EDWARD GRIMSTONE; in 1827, Sir CHARLES MANSFIELD CLARKE, Bart. (M.R.C.S. Eng., 1802, F.R.C.P. Lond., 1836), and WILLIAM CHANDLER; in 1828, WILLIAM SAMWAYS OKE (L.R.C.P. Lond., 1828; M.R.C.S. Eng., 1838; L.S.A.); in 1836, Sir DAVID DAVIES, K.G.H. (L.R.C.P. Lond.); in 1840, ROBERT HULL (L.R.C.P. Lond., M.R.C.S. Eng., 1816); in 1841, Sir WILLIAM HYDE PEARSON; in 1849, JOSEPH LAURIE (L.R.C.S. Edin., 1837); in 1850, WILLIAM BAYES (M.R.C.S. Eng., 1844; L.R.C.P. Lond., 1853) and EDMUND CHARLES JOHNSON (M.R.C.S. Eng., 1843; F.R.C.S., 1858); in 1851, FREDERICK GILDER JULIUS (M.R.C.S. Eng., 1833; L.S.A., 1833; F.R.C.S., 1853) and JOHN GREEN BISHOP (M.R.C.S. Eng., 1809); in 1854, GEORGE CANNEY (M.R.C.S. Eng., 1841; L.S.A., 1843); in 1855, JOHN HODGSON RAMSBOTHAM (M.R.C.S. Eng., 1832; L.S.A., 1832; M.D. Erlangen, 1851) and RALPH BARNES GRINDROD (L.S.A., 1830; M.D. Erlangen, 1851); in 1856, WILLIAM SHARP (M.R.C.S. Eng., 1827; L.S.A., 1826) and EDWARD PHILLIPS (M.R.C.S. Eng., 1843); in 1858, EDWARD CRONIN (M.D. Dublin, 1828), EDMUND SMITH (M.R.C.S. Eng. and L.S.A.,

1827), and WILLIAM BAKER; in 1861, JOHN RAYNER (L.S.A., 1842; M.R.C.S. Eng., 1859; L.R.C.P. Edin., 1860; M.R.C.P. Edin., 1864) and EDWARD WESTALL; in 1862, WILLIAM SHERWIN.

The information as to the sources whence these particulars might be gleaned was supplied a considerable time ago by Mr. S. WAYLAND KERSHAW, M.A., the learned and courteous librarian at Lambeth Palace.

Annotations.

"Ne quid nimis."

ANNUAL REPORT (1894) OF THE MEDICAL OFFICER OF HEALTH OF THE ADMINISTRATIVE COUNTY OF LONDON.

WE have just received a copy of Mr. Shirley Murphy's third annual report as medical officer of health of the administrative county of London. The report for 1894 is a substantial folio volume running to about 170 closely printed pages and plentifully illustrated with charts, diagrams, &c. Relating as they do to the health and sanitary condition of the population of the English metropolis, which now numbers little short of four and a half millions, these reports have come to possess an importance not inferior to that attaching to the similar publications of the medical staff of the Local Government Board. The volume before us has been evidently prepared with the same care that had been shown in the compilation of its two predecessors. The subject matter is arranged in two main sections—the first statistical, the second administrative—and these are supplemented by a series of appendices, eleven in all, which give to the entire work a completeness that leaves nothing to be desired. In consequence, however, of the bulkiness of the volume, and the costliness of its illustrations, there is little hope that it will obtain adequate general circulation. Having regard to this consideration and to the great interest attaching to so important a work, at least to Londoners, we have resolved to deal with its several sections somewhat in detail, and to review the various points for the benefit of the readers of THE LANCET in our issues of the next few weeks.

THE USE OF CHLOROFORM IN DENTAL PRACTICE.

A DEATH under chloroform which has recently occurred during the performance of a dental operation serves as a sad comment enough upon the correspondence which has recently taken place in our columns[1] upon the subject of the justifiability of using chloroform during the extraction of teeth. The particulars of the case are as follows. The patient, a girl aged thirteen, suffered from neuralgia due to two carious teeth. Her health not being good the removal of the teeth was deferred and her general health attended to. However, a recurrence of pain occurred and her medical practitioner deemed it advisable to call in a local dentist and decided to give the child chloroform. At the inquest he was asked why he did not give the girl ether, and his reply is reported to have been that he thought that she would stand chloroform better. No reason for this assertion is given, nor is any mention made of any lung or renal condition being present which would have contra-indicated the employment of ether. The patient appears to have dreaded the pain, but was reassured when she was told that chloroform would spare her all discomfort. The anæsthetic was given from a mask "slowly and cautiously. Barely a drachm had been given when she was 'under.'" The dentist had some difficulty in getting out the first tooth. Although the patient did not feel anything at first she called out "oh" before the tooth was out and twisted herself round. At this moment "the pulse was good and she breathed deeply, the face became red." No more chloroform was given. The extraction of the second tooth was then attempted. The girl grew white in the face, the pulse imperceptible, and the breathing stopped. The usual restorative measures failed to restore animation. The chloroform used was from a good maker and had been safely used for another patient. The chloroformist stated that death was due to heart failure, and added "perhaps fright had something to do with it." In addition to the above we note that the *Times* of the 22nd inst. contains the following:—"One of the district coroners of the West Riding, Major Taylor, has held an inquest at Idle on the body of Lavinia Sawdon, fourteen, who died while under the influence of chloroform on Friday afternoon last, administered by Joseph Priestley, 'herbalist and maker of artificial teeth.' The case has since been before the magistrates. Evidence as to the death of the girl was given. She called at the shop of Priestley to have two teeth drawn and she consented that chloroform should be used. She died in a chair after a second dose had been administered. Priestley had no assistance. Dr. R. Honeyburne spoke to the girl being perfectly healthy, and said a medical man would never, as a rule, both administer chloroform and extract teeth. The coroner at the inquest directed the jury to consider whether the act of Priestley was a grossly rash act or whether it was a case of misadventure. The jury deliberated an hour and brought in a verdict of 'Manslaughter' against Priestley. Before the West Riding magistrates he pleaded 'Not guilty' to the charge and reserved his defence. He was committed for trial at the next Leeds Assizes, bail being accepted."

[1] THE LANCET, March 21st and 28th, 1896.

THE FALCON-COURT IMPROVEMENT SCHEME.

THE London County Council, in pursuance of a scheme for the improvement of an insanitary district of Southwark, propose to sweep away no less than 111 houses in Falcon-court and adjoining courts and alleys. The evidence of Dr. F. J. Waldo, medical officer of health of the district, as given before the Local Government Board representative, bears out the fact that the destruction of these premises is an undoubted improvement. The Falcon-Court area, said Dr. Waldo, is hemmed in on the west by lofty model dwellings, on the east by houses lining the Borough High-street, and on the north and south by warehouses. In addition a manufactory, the Midland Railway Receiving Depôt, and other warehouses stand between the parallel courts and alleys comprised in the unhealthy area. This arrangement—an obstructive one—taken in conjunction with an existing faulty construction and grouping of houses in the area in question, effectually prevents a due admission of light and air. The dwellings themselves in many cases have no means of obtaining a through ventilation, and in those instances where a backyard is present such yard is usually narrow and insufficient for purposes of ventilation. The cellars, especially of the back-to-back houses in Falcon-court, often contain the watercloseets, ash-pails, and other sanitary conveniences. They also serve as kitchens and are generally used for the washing and drying of clothes as well as for other purposes. The occupied houses cover together one acre, thirty poles—that is to say, rather under one and a quarter acres—and upon that space 822 human beings are concentrated. The population density for the whole parish of St. George the Martyr is 211 to an acre, as against 58

for London. Eighty-nine deaths in this area are known to have occurred during the four years 1892-93-94-95, which figures give an average death-rate of 29·5 per 1000. The (corrected) death-rates for 1892-93-94-95 are 24·6 for the whole parish and 19·7 for London. During the three years 1893-94-95 188 official notices have been served under the Health Acts on owners and occupiers of property within the area under inquiry. This action, however, has only touched the fringe of a long-standing and insanitary evil, and has merely ended in the removal of a few of the grosser and more glaring defects. On the other hand, those faults of a structural nature, which are both many in number and of a serious nature, can only be mended by radical measures in the shape of a rehousing scheme followed by demolition of the buildings covering the area.

THE JENNER MEMORIAL FUND.

THE collection of "Jenner Relics" got together by Mr. Frederick Mockler of Wotton-under-Edge, and shown by him at the Bristol Exhibition of 1893, has been accepted by the Dean and Faculty of Medicine, University College, Bristol, to be located there, provided that the necessary amount (£1,000) to purchase it from the owner can be raised by public or other subscription. The Centenary of Dr. Jenner's decisive and successful experiment in vaccination will be May 14th, 1896, and now that the value of his work is receiving such terrible confirmation in Gloucester—the very town to which he belonged—we cannot but believe that the required sum will be forthcoming. Intending subscribers, of whom a very fair list has been already announced, will greatly oblige by sending in their names at their earliest convenience to the hon. treasurer, Mr. W. H. Greville Edwards, or to the secretary, Mr. D. Butler, 114, North-road, Bristol. Cheques should be made payable "The Jenner Memorial Fund" and crossed "Messrs. Prescott, Dimsdale, Cave, Tugwell, and Co., Limited, Bankers, Bristol." To each subscriber of one guinea and upwards a silver medal, and of half a guinea a bronze medal, commemorative of the Centenary of Dr. Jenner's successful experiment in vaccination will be presented at the close of the list.

THE TSETSE FLY DISEASE IN ZULULAND.

THE tsetse fly disease, called "nagana" by the natives, occurs in the horse, donkey, ox, and dog, and varies in duration from a few days or weeks to many months. It is uniformly fatal to the horse, donkey, and dog, but of the cattle affected with it a few recover. It is characterised by fever, more or less rapid destruction of the red blood corpuscles, extreme emaciation, and infiltration of coagulable lymph into the subcutaneous tissue of the neck, abdomen, or extremities, which consequently become swollen. Post-mortem examination shows the presence of a yellow, gelatinous material in the subcutaneous tissue and under the serous covering of the heart, ecchymoses in various regions, and congestion and fatty degeneration of many organs. Geographically it is limited to certain warm and moist tracts which in Zululand are situated in the vast plain extending from the coast inland for a distance of some fifty miles. The disease is not new; it has existed in such districts time out of mind. The tsetse fly (Glossina morsitans: Westwood) is about 11 mm. or seven-sixteenths of an inch in length, and has transparent wings about 10 mm. long. On the upper surface of the abdomen there is a longitudinal yellow line with four yellow lines crossing it at right angles. In 1894 Surgeon-Major David Bruce, A.M.S., discovered that the blood of animals suffering from the tsetse fly disease invariably contained a hæmatozoon which had not been previously observed in Africa, but which he considers to be either identical with or closely resembling the Trypanosoma Evansi found in surra, a disease occurring in India and Burmah; surra, however, as known in India, does not affect cattle. In fresh blood these hæmatozoa are seen as actively moving transparent elongated bodies, in thickness about a quarter of the diameter of a red corpuscle, and in length about two or three times the diameter of a corpuscle. One end is bluntly pointed and the other is prolonged into a very fine lash, which is in constant whiplike motion; the body is cylindrical and has a transparent, delicate longitudinal membrane or fin, which is also in constant motion. In September, 1895, Surgeon-Major Bruce, under instructions from the Governor of Natal, proceeded to Ubombo in Zululand for the purpose of continuing his investigations. He believes that the fly acts only as a carrier of these microbes from infected to susceptible animals and does not cause the disease by means of any poison elaborated by itself. A limited number of flies may bite a susceptible animal over and over again without producing any ill effect, but when a horse is taken into the fly country for even a few hours, or when numerous successive relays of flies freshly caught in the fly country and brought into a healthy district are made to settle on an animal there, the disease is almost inevitably set up. Five flies kept in a cage with muslin sides were allowed to bite the shaved abdomen of a small dog every two days from Sept. 25th to Nov. 23th, but the animal remained quite healthy. On the other hand, flies which had fed for a short time on a dog affected with fly disease were allowed to bite another dog on Nov. 21st, 23rd, 25th, and 29th, the effect being that on Dec. 5th hæmatozoa were found in its blood. In order to show that neither food nor water is the channel by which the disease is conveyed two healthy horses, provided with network nosebags, were taken into the fly country from about 10 A.M. to 4 P.M. on Sept. 19th, 24th, and 29th, but were not allowed to graze or drink. Many flies settled on them and they both contracted the disease, one on Oct. 4th and the other about Oct. 28th. Another experiment was made by bringing to Ubombo tsetse flies caught in the low country and allowing them to bite a healthy horse; 129 flies were used in this way on ten days from Nov. 22nd to Dec. 14th, the horse fell ill on Dec. 15th, and the hæmatozoa were found in its blood. The source from which the fly obtains the hæmatozoa still remains to be discovered. Copious details, with drawings both of the hæmatozoa and of the fly (those of the fly being coloured), are given in Surgeon-Major Bruce's report on the subject, presented to the Governor of Natal and printed by Messrs. Bennett and Davis of Durban. Our columns last year[1] contained a similarly interesting memoir on the horse sickness of South Africa by Dr. Alexander Edington.

THE OUTBREAK OF GLANDERS IN LIVERPOOL.

THE somewhat exaggerated reports of the spread of glanders in horses in Liverpool have not been unattended with good results, as they have had the effect of putting team owners and others on the alert. At the same time there is no doubt that an outbreak, which might have been attended with the most serious consequences, has, we are pleased to hear, been practically nipped in the bud. This is due to the prompt measures adopted by the Health Committee of the City Council, a deputation from which body, we understand, waited on the Board of Agriculture last week in order to obtain powers for the effective repression of the disease. We are informed that the Liverpool deputation laid before the Board the necessity for isolating horses which had been in contact with diseased animals, powers which, it appears, are not now possessed by

[1] THE LANCET, Aug. 24th, 1895, p. 477.

the Board of Agriculture, and for which a special Act of Parliament is required. The deputation also suggested the compulsory notification of disease amongst horses; they also alluded to the importation of horses from abroad, by means of which, it was stated, influenza had been imported into the city, especially by horses from American and Canadian ports. They strongly advocated a compulsory system of inspection and the isolation of all imported horses. It seems most anomalous that horses can be landed from abroad without inspection and sent about the country from stable to stable irrespectively of diseased conditions; legislation on this point is absolutely necessary, as the powers now possessed by local authorities are restricted to ordering the slaughter of horses found to be affected with glanders. As a result of the interview between the Liverpool deputation and the Board of Agriculture a scheme was agreed on, in the absence of Parliamentary powers, which is much the same as that adopted by the London County Council, viz.—to isolate horses in sheds somewhere in the suburbs under the supervision of the veterinary superintendent. The owner of a horse which is suspected of being infected with glanders can send the animal to the isolation shed, the mallein test, with his consent, will be performed, when, if the horse reacts to the inoculation, it will be placed in a separate shed and frequently treated with mallein. Should the horse recover the owner must pay for its maintenance and treatment; but if, on the other hand, it develops symptoms of glanders the animal is to be slaughtered, the owner receiving as compensation one-fourth of its original value. As an estimate of the disastrous results which would accrue to Liverpool by the spread of this disease, we may mention that it is computed that 12,000 horses, some of great value, are employed by team owners, whilst tramways, cabs, and omnibuses employ between 6000 and 7000 more.

THE PERSISTENCE OF EXCITABILITY IN DIVIDED NERVES.

THE duration of the excitability of the distal end of a divided nerve is a point that has attracted the attention of many observers, and Longet, more than half a century ago, stated as a fact which has been very generally accepted that after division of the facial, hypoglossal, and sciatic nerves in the dog the most remote branches of the distal portion ceased to respond to stimuli after the lapse of four days. The first part of the *Archives de Physiologie* for the present year contains a short communication from Professor Arloing, a practised and careful experimenter, in which some strictures are made upon Longet's statement and evidence is adduced showing that the irritability of the divided nerve is not always uniform in the date of its departure and that considerable variations may be observed both in different genera and even in different animals of the same species. Thus Ranvier observed that whilst irritability might persist in the dog for four days, it was lost in the rabbit, guinea-pig, and rat in the course of forty-eight hours, and after the lapse of sixty-two hours in the pigeon. Ranvier also pointed out that it disappeared more quickly in young animals than in adults and in vigorous animals than in those that were ailing. Professor Arloing himself found that in the horse, ass, and mule the persistence of irritability in the branches of the facial nerve after section of the trunk was remarkable, being prolonged in some cases to the thirteenth day. The particular instance in which the functional activity of the nerve lasted to the thirteenth day was in an ass in which the facial nerve had been divided. Different nerves seem to vary in their faculty of retaining their irritability, for whilst in one case the peripheric extremity of the divided facial nerve retained its excitability for five days, the corresponding portion of the divided median and of the moderator of the heart had both lost their excitability between the fourth and fifth day. A physiological and highly valuable test is thus afforded of the existence of certain doubtful nerves. Professor Arloing, for example, has in this way satisfied himself of the presence in the cervical portion of the vagus nerve of the ass, besides the cardiac inhibitory, cardiac accelerator fibres, and motor fibres for the larynx and œsophagus, of yet a fourth set which is characterised by the retention of its excitability for three weeks after section, and which he regards as the ordinary motor nerve of the myocardium.

THE ABUSE OF MATERNITY CHARITIES.

WHEN other charitable medical institutions are trying to administer charity without abuse it behoves the authorities of lying-in hospitals and maternity charities to do the same. There is some reason to believe that tickets for the midwife are granted loosely to those who can afford to pay the ordinary fees. This is contrary to public policy and to the understanding with the good charitable people who subscribe. We feel persuaded that the committees of such charities will not resent a reminder on this point. The midwife should not be the almoner of letters and evidence should be forthcoming in every case of the circumstances of the patient.

THE LATE DR. WILLIAM SHARP.

DR. WILLIAM SHARP of Rugby died at Llandudno on April 10th, aged ninety-one years. He was born at Armley, near Leeds, studied medicine at Guy's and St. Thomas's Hospitals, and became qualified as L.S.A. in 1826. Next year he took the diploma of the Royal College of Surgeons of England, studied in Paris for a time, and settled in Bradford in 1828. In 1840 he was elected a Fellow of the Royal Society in recognition of his advocacy of local museums. In 1843 he removed to Hull and in 1847 to Rugby. Dr. Sharp was a prolific writer, and in 1856 the degree of Doctor of Medicine was conferred on him by the Archbishop of Canterbury. This Lambeth (or Cantuar., which might, by the way, be mistaken for Cantab.) degree supplies an interesting chapter in medical history and is dealt with at length in another portion of our issue.

THE STUDY OF PHYSIOLOGY IN MOSCOW.

AT present, when the attention of the medical world is being drawn to Moscow, any information concerning the medical schools, laboratories, and institutions of that city is of interest. Some time ago the committee of organisation of the International Medical Congress issued a series of papers giving descriptions of some of these institutions. The first one that has come to hand ("Le Laboratoire de Physiologie de l'Université Impériale de Moscou," par M. le Dr. B. N. Popov) gives a short account of the Institute of Physiology of the University of Moscow. This institute was founded in 1862, when Professor Einbrodt was elected to the chair of Physiology, and has since that time gradually expanded first into two chairs—histology and physiology—and then into a double professorship, Professor Chéréméteveský nominating Professor Morokhovetz as professor agrégé. Professor Morokhovetz, as a result of careful planning and of visits to the various large Continental laboratories, has been able to found and equip a physiological institute, which appears to be exceedingly well arranged and to be supplied with all the requirements of a modern laboratory. A list of the papers, fifty-one in number, that have come from this department since the year 1857 is worth studying as indicating what has been done in a very quiet way during the last forty years. In a second pamphlet ("Appareils et Instruments à l'Usage des Physiologistes construites d'après les dessins de M. le

Professeur Léon Morokhovetz, Moscou") a list of the apparatus designed by the writer and used in this laboratory is given; it is freely illustrated with photographs and plates, and a number of pieces of most ingenious apparatus which should attract the attention of those who take an interest in physiology are described. We recommend those who intend to make the journey to Moscow next year to keep these laboratories in mind.

THE SWISS NATIONAL EXHIBITION AT GENEVA.

FROM May 1st till the middle of October a national exhibition will be held at Geneva, and the programme which has been sent us promises well. Mr. M. J. R. Dunstan, the Director of Technical Instruction to the Nottingham County Council, has been appointed the official delegate of the Council to the exhibition with the object of making a thorough investigation into Swiss agricultural methods as exemplified in the central feature of the exhibition—the model village. Among the novelties to be introduced to the public at the exhibition is an instrument for "the cure of dyspepsia." A box or case is placed round the body in the region of the stomach and liver, a handle is turned, and "liquid air is pumped in through the pores of the skin." We abstain from further description of an apparatus which as yet we have only seen described on paper.

THE CLINICAL RESEARCH ASSOCIATION.

THE first annual report of the Clinical Research Association, Limited, is a satisfactory record of useful work. The Association was formed in September, 1894, its object being to assist medical men in the diagnosis and treatment of their cases by providing them with accurate laboratory reports on pathological products. At present there are more than 2000 members, representing every branch of medical practice, and the actual number of investigations conducted in the laboratory during the first twelve months after it was opened was 5227, including 1532 in the chemical department, 984 in the histological, and 2610 in the bacteriological. The chemical examinations related chiefly to urine and the bacteriological to pus and diphtheria exudation. Experienced attendants with instruments are sent to assist at necropsies. Subscribers of one guinea before the end of 1896 will, we are informed, be exempt from any further entrance fee and from any annual subscription and will have work done for them at the reduced scales charged to members. The offices of the Association are at No. 1, Southwark-street, London Bridge, S.E.

THE PREVENTIVE INOCULATION OF DOGS.

THE researches undertaken by M. Pourtalé in collaboration with Professor Jolyet regarding the preventive inoculation of dogs against hydrophobia do not appear to have excited much attention, although the subject is unquestionably one of considerable importance. It is certainly better to prevent an evil than to cure one, and if dogs can be rendered refractory to hydrophobia in the manner advocated by these investigators it would seem as though we were arriving within measurable distance of the annihilation of one of the most terrible of all diseases. The conclusions which M. Pourtalé came to were laid by him before the International Congress for the Advancement of Science in August last, and also before the Sixth International Veterinary Congress, held at Berne in the following month; but according to a communication which M. Pourtalé recently made to the Société d'Hygiène at Bordeaux the reception he met with was far from encouraging. The president of the section at Budapest, Professor Hutérat, while cordially recognising the academic merit of the work, was, nevertheless, of opinion that it was not necessary to take any further action with regard to it, and at Berne "the systematic opposition which has for years pursued all endeavours to establish the prophylaxis of hydrophobia" is likewise said to have been in the ascendant with the majority of the members of the congress. That M. Pourtalé was not entirely destitute of supporters is, however, clear from the following resolution, which was proposed as an amendment: "The Sixth International Congress of Veterinary Medicine, taking into consideration the major importance of the author's conclusions as to the immunising and curative inoculation of dogs against hydrophobia, expresses the hope that all persons engaged in experimental science will interest themselves in the verification and control of the tests upon which these conclusions are founded, with a view to the introduction into the various European states of preventive canine vaccination after the method indicated."

LONDON POST-GRADUATE COURSE.

THE daily classes in Bacteriology are now going on and the summer term will open on Monday, May 4th, to be followed by the summer vacation courses during the first fortnight in July. The classes will meet at Moorfields (Eyes), Blackfriars (Skin), Great Portland-street (Throat, Nose, and Ear), King's College (Bacteriology), Cleveland-street (General Medicine and Surgery), Institute of Preventive Medicine (Urine Testing, &c.), Parkes Museum (Hygiene), and classes in Pathology and other subjects will also be formed. The large number of practitioners who find themselves in London or who can spare the time to visit the metropolis will be able during the next two or three months to occupy themselves profitably. Early entries will materially assist in the formation of classes. A prospectus can be obtained from Dr. Fletcher Little, 32, Harley-street, W.

A NONAGENARIAN AMERICAN PHYSICIAN.

A RECENT number of the Philadelphia *Medical and Surgical Reporter* contained an appreciative obituary notice of Dr. Hiram Corson, who was born in Plymouth township, Montgomery county, Pennsylvania, on Oct. 8th, 1804, and died at the same place on March 4th in the present year. He received his diploma in medicine from the University of Pennsylvania in 1828 and the same year he established himself at Plymouth Meeting, where he continued in active practice for more than sixty-five years. It was not until a year ago that his advanced age compelled him to retire from work and he was then the oldest practising medical man in the United States. He was a member of the Orthodox Society of Friends and was conspicuous for his influence in the meeting at Plymouth. Dr. Corson was one of the first among American medical men to advocate the formal recognition of female practitioners. He was a frequent contributor to the *Medical and Surgical Reporter* from its commencement, and as recently as May, 1895, an article by him on Diphtheria and its Treatment was published in its columns.

A CORONER ON THE CONTAGIOUS DISEASES ACT.

THE coroner for West Surrey (Mr. G. F. Roumieu) held an inquest on April 15th at Godalming on the body of a young seaman who had hanged himself. Depression was clearly the cause, a letter the young man left containing the sentence, "Everything I do I cannot get right, so I think it is best that I were out of the world." The rest of the epistle—it was couched in pathetic language—dealt with family matters and arrangements. The young man who had been staying with his aunt and uncle was on leave from H.M.S. *Excellent* at Portsmouth and was to have been drafted to H.M.S. *Fox*. A medical man does not appear to have been

called, but a policeman who had examined the body stated that the deceased had "contracted a serious disease." Warrant-officer McDowell of Portsmouth said, in answer to a question from the coroner, that the men in the navy were greatly affected in this direction, the numbers being something appalling. While they were commissioning H.M.S. *Fox* on one day upwards of sixty men were rejected by the medical officers on this account—a remark which created what the reporter calls "sensation." The coroner, in summing up, urged the importance of the re-enforcement of the Contagious Diseases Act. There could not be any amelioration in the disgraceful and disgusting state of the army and navy, he said, until that step was taken. So deplorable a state of affairs as that which had been mentioned called for some supervision, and he thought nearly all of them agreed with him that it was essential that something should be done. The jury returned the customary verdict of "Temporary insanity."

COUNTRY HOLIDAYS FOR FACTORY GIRLS.

IT always gives us pleasure to call attention to the annual report of the "Factory Girls' Country Holiday Fund," of which the Duchess of Teck is patron. The report for 1895 marks the eighth year of the work of the fund and shows an increase in the number of girls sent away of 180 over the number for 1894. For an expenditure of £850 15*s.* 2*d.* 874 girls and women—whose individual holidays represent in the aggregate 1440 weeks—were enabled to leave their unhealthy surroundings and take up their residence in the country. To those who are compelled to spend the greater part of their lives amid the roar of machinery, among the noisome fumes of chemicals, standing for hours together at a bench or sitting with the head bent and the eyes ceaselessly straining to follow the work in hand, a week or a fortnight in the country means a new lease of life physically and morally. The Fund is a most deserving one, and we can only echo the wish that donations may so increase that the number sent away will each year "be supplemented without break until we attain the ultimate goal of our efforts—viz., that every girl or woman employed in the factories and workshops of this huge metropolis may be certain of obtaining a fortnight's recreation in the country."

DEATHS UNDER ANÆSTHETICS.

ONE of the gravest perils connected with anæsthesia is asphyxia due either to paralysis of the central controlling mechanism regulating respiration—a condition usually easily detected and remedied—or to some peripheral interference with breathing—e.g., spasm of the glottis, foreign bodies in the air passages, &c. In cases of empyemata where the abscess opens into a bronchus this danger is rendered acute. The patient is liable to be turned on the side for operative purposes and the pus coughed from the diseased side is aspirated into the lung of that side and in some cases even into that of the healthy side. This, coupled with the hampered condition of the heart from pressure or displacement, too often determines a fatal issue. Through the courtesy of Dr. Howard Green we record a case of death under the A.C.E. mixture followed by ether which exemplifies these remarks. The patient, a young woman aged twenty-five, was admitted to Charing-cross Hospital for relief of an abscess in her chest. The position of the abscess was not determinable by repeated acupuncture, and as the patient was rapidly losing ground it was decided to resect a rib and explore the chest. Her condition at the time of operation was critical. Hectic fever, progressive emaciation, and constant expectoration of foul purulent material existed. The empyema affected the left side and was believed to be of gastric origin. The patient was given the A.C.E. mixture (two drachms) as a preliminary to ether, and the chest was punctured. The second puncture drew pus. Resection of the rib was commenced, but the patient became asphyxiated from pus entering the air passages in large quantities. The amount of ether given was an ounce and a half. Artificial respiration was practised, but recovery did not take place. We are not told what position the patient was in when the operation was in progress.

BOARDS OF GUARDIANS AND THE VACCINATION LAWS.

THE severe object lesson enforced on the city of Gloucester in consequence of the guardians not carrying out the existing law as to primary vaccination should cause those boards who have for some time left this duty in abeyance to rescind their previous resolutions, which were to the effect not to enforce the law till the report of the Royal Commission was issued. In consequence of a letter addressed to the Wigan board of guardians by Mr. Berry, medical officer of health of Wigan, the following resolution was passed at their board meeting on April 17th, namely: "That the vaccination officers throughout the union be instructed to forthwith carry out the Vaccination Acts." It would be well just now for all medical officers of health to call the attention of their boards of guardians to the non-fulfilment of the law in reference to the carrying out of the Vaccination Acts and ask them to pass a similar resolution.

HOW DISEASE IS SPREAD.

THERE has lately been some correspondence on this subject in the *Standard* which is interesting in contributing to our knowledge of the great carelessness which some individuals exhibit as to the public welfare. The few cases that we hear of are, unfortunately, in all probability a very small proportion of those who actually travel in an infectious state. It would be well if individuals more thoroughly realised the far-reaching effects of illness and death which their selfishness or carelessness may lead to, and a severe penalty in all cases where carelessness in this matter has been proved should be inflicted. Of the cases which have been quoted, by far the worst example is that of a young woman who was sent from a London school when suffering from scarlet fever in order to save the school, and while in a highly infectious state is said to have travelled in at least three public conveyances. Under such circumstances the possibilities of the disease spreading are enormous and the only wonder is that so many people escape. We may also refer to some correspondence on "Cigar-ends" which has likewise appeared in the *Standard*. "A Smoker" recommends that all cigar-ends, &c., should be placed where they can be readily seen and picked up by poor people or that they should be collected and given away wholesale. Such a suggestion is to be most strongly condemned from most points of view, and more especially from the medical. Most medical men have seen diseases of the worst type accidentally acquired through drinking out of an infected cup or smoking an infected pipe, and to encourage the smoking of other people's cigar-ends is at the best to encourage a disgusting practice which may often end disastrously to those who indulge in it.

THE LATE BARON HIRSCH.

FROM Hungary comes the news of the death of Baron Hirsch, in his sixty-fifth year. The news will be received with profound regret by the social and sporting worlds in which the Baron was a distinguished figurehead, but by none will his death be more regretted than by those who have been the recipients of his charity, under which comprehensive heading fall all who have benefited by his munificence to the London hospitals. It is said that up to

the year 1891 Baron Hirsch had spent the extraordinary sum of £3,000,000 on objects of charity, and two years later it was announced that he had distributed a sum of about £42,000 among selected charities. In 1894 he caused £15,000 to be divided among London hospitals and charitable institutions, and last year the medical charities of London received from him donations amounting in the aggregate to £5000. His sympathy for the poor of his own faith is well known, and his scheme of colonisation will prove a lasting memorial of his name among the Semitic race; but the remarkable cosmopolitan character of the man is shown by the fact that he did not regulate his munificence by any considerations of race, colour, or creed, but distributed his wealth where he thought it was most required. All his winnings on the turf in gross amount, with no deduction for enormous expenses, were spent on objects of charity—he is said to have himself used the words, "I race for the London hospitals"—and it must not be forgotten that these winnings were often supplemented from other sources of his income. In 1894, when his winnings only amounted to £7500 he doubled the sum, and, as we have recorded above, gave £15,000 to London charities. Baron Hirsch will be sincerely mourned by the thousands who reaped the fruits of his wide benevolence.

MEDICAL MEN AND EVIDENCE IN DENTAL MATTERS.

AN action recently heard at the Cardiff county court opens up a point of interest as to the value of medical evidence on questions relating to dental surgery. In the case in question a registered dentist sued for the recovery of fees, the defendant putting in a counter claim for damages alleged to have been sustained in connexion with the operation performed by the plaintiff—namely, "scaling." In the course of her evidence the defendant stated that her mouth had been so injured that she was compelled to leave off her work, obtain a substitute, and eventually to call in medical advice. In support of this the medical man was called and stated that the condition of the patient's mouth might have been caused by dirty instruments, although he was unable to state whether or not it was due to any particular malpraxis on the part of the defendant. The judge commented on the evidence of this witness, finding that it showed unnecessary animus. We hope that here the judge was mistaken, but a second remark that fell from him deserves attention. The defence was practically a charge of malpraxis, and he said that a qualified dentist, practising specially as a dentist, should have been called to speak to this and not a general practitioner. We think that the very large majority of medical practitioners would prefer not to express anything like an expert opinion upon a question relating to the practice of dentistry, especially in connexion with a charge of malpraxis.

THE ANTI-VACCINATION CRAZE AT EASTBOURNE.

IT is important at the present time, when small-pox and rumours of small-pox meet us at every hand, that persons intending to proceed to our health resorts should be in possession of reliable information regarding the condition of the place selected. This is the tone which a correspondent takes in forwarding to us a copy of the *Eastbourne Chronicle* of the 11th inst. We find in its columns a short space allotted to a discussion of the vaccination question by the board of guardians. Miss Hall, one of the lady members, had the courage to bring forward the matter of the serious state of the town, there being vast numbers of unvaccinated children growing up in the place, and pointed out that as regards the infants born in 1894 only 10 per cent., and of those born in the succeeding year only 19 per cent., were returned as vaccinated. She laid stress on the prevalence of small-pox at Gloucester as calling for reconsideration of the attitude of the guardians towards their plain duty under the Acts, and drew attention to the dependence of the town on the large number of visitors who flocked there from time to time. But the matter was speedily quashed by others, and the raising of the question was deplored at the present moment *when the season was just beginning* and so soon after the scare about bad water. As to the latter point we now say nothing, but we do most emphatically advise all intending visitors to Eastbourne this year to get themselves re-vaccinated before going there, and to see that their children are protected at least by primary vaccination. With the inflammable material now in the place it behoves all who desire to stay at Eastbourne to secure protection.

A REPORT by the medical officer (Dr. W. R. Smith) of the School Board for London on the Prevalence of Diphtheria in London and Elsewhere, and its Alleged Connexion with the Elementary Schools, was presented to the Board on Thursday last. We must defer analysis of its contents until a later issue of THE LANCET, with the remark that its publication practically simultaneously with that of the Annual Report for 1894 of the medical officer of health of the Administrative County of London will serve to increase the interest of both reports.

MR. T. A. DE LA RUE, the chairman of the council of management of the Royal Chest Hospital, City-road, E.C., has sent a donation of 300 guineas towards the fund being raised in connexion with the festival dinner to be held at the Hotel Métropole on May 26th. The Right Honourable Lord Charles Bruce, P.C., president of the hospital, will take the chair on the occasion.

A MEETING was held on Tuesday afternoon at 20, Hanover-square, to consider the suggestion of the School Board that Dr. Glover and two others should meet the School Attendance Committee to discuss matters which affect the friendly relations of the profession to the board. The suggestion was accepted and arrangements were made for such a meeting.

MR. EDGCOMBE VENNING will preside at the annual dinner of the St. George's Hospital Medical School on Oct. 1st next. The introductory address will be given by Mr. Wm. Adams Frost, ophthalmic surgeon to the hospital.

WE understand that Dr. Wilks, since his appointment as President of the Royal College of Physicians of London, has resigned his seat on the General Medical Council as representative of the University of London.

THE French Academy of Medicine has decided to divide a prize of 25,000 francs between Dr. Roux of Paris and Dr. Behring of Berlin, in recognition of their joint work upon the antitoxic treatment of diphtheria.

THE annual dinner of the Army Medical Department will be held this year in the Whitehall Rooms of the Hôtel Métropole, London, on June 15th, 1896, at 7.30 P.M., the Director-General in the chair.

THE Queen has signified her gracious intention of subscribing 100 guineas to the fund now being raised for the re-endowment of Guy's Hospital.

THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER XVII.

The Contemporary Medical Press. — Its Attitude towards THE LANCET.—*The Medical and Physical Journal.—Macleod v. Wakley.—Dr. James Johnson.—The Medico-Chirurgical Review.—Wakley v. Johnson.—The London Medical Repository.—The Medical Gazette.*

IT has been previously noticed that the interference of other medical journals had an exceedingly irritating effect upon Wakley. The virulent articles in the *London Medical Repository* had impelled him into continued litigation with Abernethy, and the narrow protests of the *Medico-Chirurgical Review* led to the strictures upon "hole-and-corner" surgeons, which resulted in the two lawsuits, Tyrrell *v.* Wakley and Bransby Cooper *v.* Wakley. It would seem at first sight that this susceptibility to criticism at the hands of the press betokened some weakness and inconsistency, as a man who gives hard blows himself ought to take punishment quietly. But this would not be quite a just estimate of the position. Wakley was a pugnacious man, and the advice of journalistic rivals for whose methods he had no respect only made him more resolute to go his own way. He did not wince under stricture, but he writhed under well-meaning advice. In the very early days of THE LANCET his inimical attitude towards the medical press had its only explanation in this proud and pronounced restiveness, but later the position became more serious. Wakley was set up by his brother editors as a bogey-man and a terrible example. Astounding lapses of truth and decency were attributed to him, and dark hints as to his past were scattered broadcast. A paper was specially subsidised by his opponents to run counter to THE LANCET, and it, like its older contemporaries, showered personal abuse upon Wakley. Language in those days was somewhat unmeasured, and Wakley's retorts were very strong, full-flavoured, and effective. The survival of THE LANCET while all its rivals have long since succumbed keeps Wakley's language on modern record, while that of his adversaries is lost to memory. The early numbers of THE LANCET in which this wordy warfare was waged—not, as will be seen, that the warfare always stopped at words—have often been reprinted and many libraries possess them. All interested in the history of medicine constantly consult them, and in so doing must happen upon some of the many contentious articles. It would be difficult for such readers to acquit Wakley of scurrility, but for the right understanding of him it is necessary to know something of those against whom he was fighting and to appreciate a little the measure of offence that he received. Also the license of the time must be insisted upon, for in the twenties and thirties what now seem the necessary amenities would have been regarded as mealy-mouthed hypocrisies.

There were three contemporary medical journals of some consequence published in London at the time that Wakley founded THE LANCET. These were the *Medical and Physical Journal*, the *Medico-Chirurgical Review*, and the *London Medical Repository*. The *Medical Gazette* followed almost immediately.

The *London Medical and Physical Journal* was founded in 1799 as the *Medical and Physical Journal*. The original editors were Messrs. Bradley and Willick, of whom fame has nothing to relate; but a new series was started early in the century under the editorship of Dr. Roderick Macleod. It was a decent monthly magazine of some ninety pages, with no particular reason for its existence. Its editor followed an easy conservative policy, and the bulk of its articles were translations from the foreign medical journals, with critical remarks appended, while long excerpts from scientific books were inserted as reviews. When THE LANCET was first started the *Medical and Physical Journal* ignored its existence—which looked like dignity. But in three years' time this policy became laughable, because all the profession were speaking of the revolutionary weekly paper of which the *Medical and Physical Journal*, addressed monthly to that profession, had no cognisance. This was very well at first. But later the *Medical and Physical Journal* became frankly imitative. Its circulation had waned, many of its subscribers having been seduced from it by the more spirited management of THE LANCET, and Dr. Roderick Macleod invited to his columns contributions from hospital officials. He proposed, in fact, to publish hospital reports as THE LANCET was doing. These reports, and, indeed, the whole of the journal, were subjected frequently to bitter criticism in THE LANCET. This was natural, and not due, it should be added, to any excess of journalistic rivalry. It was all in the way of fair rejoinder, for Dr. Roderick Macleod when he found himself compelled, if he desired at all to register public thought, to notice THE LANCET had been severe upon it and very high with Wakley. He had found fault with his taste in publishing hospital reports and the lectures of hospital surgeons. Then Dr. Roderick Macleod took to the same ill habit himself. It is true that Wakley published independent accounts of the medical and surgical proceedings of the day without asking permission from anyone, and that Dr. Roderick Macleod only published accounts sent to him by the different operators, but this was not a distinction with so much meaning as it would appear to have. The various hospital surgeons had found Wakley's action in publishing these reports to be wrong, not because their leave was not asked, but because they considered the publicity thus afforded to the doings within the walls of hospitals would militate against the interests of the profession. And Dr. Roderick Macleod's journal had approved of their view. In no uncertain terms he had declared the publication of lectures and hospital reports to be a monstrous breach of professional etiquette. Therefore, it was inconsistent of him to desire to publish these reports and to consent to be the medium through which they should reach the world, and it was this inconsistency that gave Wakley his opportunity of retaliation. He took it and unsparingly. The *Medical and Physical Journal* had a yellow cover and was termed a "Yellow Fungus," while Dr. Roderick Macleod's sonorous baptismal name was eternally introduced into the columns of THE LANCET and always in some ridiculous connexion. Either as Roderick the Goth, or as the Editor of the Gothic Absurdity, or as plain Roderick, he was made the perpetual object of a ferocious sort of joking. Dr. Roderick Macleod answered back, but he had neither the force of his adversary nor the same popular cause. Wakley was working for the profession at large and his methods, right or wrong, were consistent. Dr. Roderick Macleod, a member of the honorary staff of St. George's Hospital, represented his own order only and stood convicted of tergiversation. At last the strained relations brought the rival editors into a law-court. The dispute was an entirely trivial one, but so clearly was it inevitable that a judge would sooner or later be asked to decide between them that it was well for the reputation of both and for the after chances of peace that the quarrel had no serious origin. It arose out of a difference of opinion as to the merits of

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., and XVI. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, 22nd, and 29th, March 7th, 14th, 21st, and 28th, April 4th, 11th, and 18th respectively.

what is now known as "Wardrop's method" of distal ligature for the cure of aneurysm. Dr. Macleod appears to have thought lightly of the method and published an account of "the dissection of one of the cases of aneurysm in which the artery was *supposed* to have been tied beyond the tumour," the object of the publication being to show that Wardrop's operation had failed in this instance. Wakley then published the alleged libel, which had been intended as a rebutting statement in Mr. Wardrop's behalf, who was a highly valued member of Wakley's literary staff. He pointed out that the patient on whom the post-mortem examination had been made had died from other causes entirely than aneurysm, so that it was unfair to speak of it as a case where Mr. Wardrop's treatment had failed, and went on to say that while Dr. Macleod was ready enough to publish what he thought was a failure he had omitted to publish a successful case which had occurred some months back. The accusation was that in his character as editor Dr. Macleod had been guilty of improper partiality. As a matter of fact Dr. Macleod *had* published the successful case and Wakley had overlooked it. The defence was that the comments had been made in fair rivalry and that an oversight had occurred. Mr. Brougham, who looked after Wakley's interests, was not instructed to offer any apology. The libellous paragraph alluded to was offensively worded, and this, coupled with the absence of all apology, caused the jury to award to Dr. Macleod £5 damages out of the £100 that he claimed. Dr. Macleod resigned his position as editor shortly after this case and became editor of the *London Medical Gazette* in 1827. The *London Medical and Physical Journal* ceased to exist in 1833.

The *Medico-Chirurgical Review* was edited by Dr. James Johnson, another of Wakley's contemporaries whose enmity to him was undoubted. Dr. James Johnson, an Irishman, was, like Wakley, the son of a farmer. He was born in 1778, and apprenticed at the age of fifteen to a medical man in Antrim. At the age of twenty he was appointed surgeon's mate in the navy, and later he served as full surgeon in the Egyptian campaign. It is worthy of note that at this time he possessed no diploma. In 1800 and 1801, being on leave, he studied at the Windmill-street School (Dermott's), where he was a very assiduous worker. He was appointed to another ship and cruised in the Northern seas, Greenland, and Hudson's Bay. On his return he again studied in London, as he did on his return from a second cruise, spending his prize-money in walking the hospitals. In 1806 he attended the lectures of Sir Astley Cooper with assiduity, and, possibly through that great man's boundless interest, was appointed to the *Impregnable*, Captain the Duke of Clarence, afterwards William IV. This was the turning point of his career. He became surgeon to the Duke, and at the peace in 1814, when Bonaparte was believed to have been safely relegated to Elba, settled down to practice at Portsmouth, where he was very popular with the Naval authorities. In 1816 he started the *Medico-Chirurgical Review*. This was at first called the *Medico-Chirurgical Journal*, and was published monthly in collaboration with two medical friends, but in 1818 he took over the whole liability and became the sole proprietor. He then changed the title of the periodical and transformed it at the same time into a quarterly. He wrote the greater part of his *Review* himself. This he was competent to do, for though largely self-taught he was a widely-read, able, and industrious man. In 1821 he took the degree of M.D. St. Andrews, at that time obtainable by decidedly lax methods.

This brief sketch of Dr. James Johnson, or Johnstone, as he later called himself, reverting to his correct patronymic, is necessary to the comprehension of some of the personal allusions to him. The *Medico-Chirurgical Review* at the time of the issue of THE LANCET enjoyed a large circulation and a good reputation. In the last number of 1823 Dr. James Johnson acknowledged the receipt of the early numbers of THE LANCET in terms which seem to have been intended to be amiable; but Wakley objected to their patronising ring, and what was intended to be a sort of welcome struck the first note of the future relations of bitter and prolonged quarrel.

"We hold it to be a breach of etiquette for one periodical publication to animadvert on the conduct of another unless attacked or interfered with itself," said the *Medico-Chirurgical Review*. "We mean, of course, medical journals, for political publications use no ceremony with each other. In offering a word or two of advice to our young friend The Lancet, and through him several others of our juvenile contemporaries, we trust they will not impute to us any unworthy motives, and that on mature reflection they will acknowledge the propriety of the advice we give .....

"We are convinced, then, that no medical periodical publication can succeed unless conducted on *unexceptionable* principles—we mean such principles as cannot be reasonably objected to by the members of the profession. We think that the unauthorised publication of a man's lectures as they are delivered from day to day cannot be defended on principles of morality, equity, or medical ethics, and therefore we advise our junior contemporaries not to take advantages of, or rely upon, a practice which can at best but afford a temporary interest. Secondly, we would dissuade them, if in our power, from mixing up politics, theatrical criticisms, and other heterogeneous matters with medical science or literature. It is an unnatural union which cannot long hold together, and has invariably failed hitherto in every instance where it was attempted. The above exceptions made, we wish every success to The Lancet and all other candidates for public favour; nor will we ever refuse to give whatever publicity they require through the medium of this journal."

The qualified proffer of friendship was rejected roughly by Wakley, who did not think that a quarterly *résumé* of things in the medical world, written in the interests of a few leading men, could be of any practical use to his revolutionary weekly print. The unceremonious manner in which Dr. James Johnson was told to mind his own business and try to obtain something readable for his own paper galled that hot-headed sailor, who seems at once to have made up his mind to demonstrate the good he might have been by the harm he could do. The following number contained an article headed "Property and Privileges of Lecturers, Hospitals, and Medical Societies Considered." It formed nearly six pages of forcibly written censure on the practice of publishing lectures, the writer challenging Wakley to produce a "single respectable testimony in favour of the practice," and saying "that the baleful influence of a private spy and public informer" will with "vampyre presence chill the current of communication between the preceptor and the pupil." This article defined the relations that were to exist between the rival editors, and for the next two years THE LANCET and Wakley were made the subject of the most unfavourable comments by Dr. James Johnson, while Wakley answered back in like vein. Each hit very hard. Dr. James Johnson was the elder—a man with an unblemished record, the friend of the heads of the profession, accepted by them as an exponent of medical thought, an officer of the two most important scientific societies then meeting in London, and a friend of Royalty; so he may be said to have carried heavy guns. On the other hand, his acquaintance with the leaders of the medical world hampered him by taking away from him his powers of free criticism, while his quarterly form of publication precluded him from any reply to attacks made upon him until, perhaps, three months had elapsed. Wakley's position was not in those early days so influential as that of Dr. James Johnson, but he got thirteen shots to one, and his ease in manœuvring gave him immense advantages over his adversary.

In the third year of the issue of THE LANCET came the

action-at-law that had been expected by everyone since the disputes began. Each side had been so profoundly abusive of the other that no one could guess who would be plaintiff and who defendant, but that legal proceedings were inevitable all could see.

On June 21st, 1826, the libel action of Wakley *v.* Johnson occupied the attention of the Chief Justice of the Court of Common Pleas and a special jury. The plaintiff was represented by Mr. Denman and Mr. Fitzroy Kelly; while the defendant retained two of the most noted members of Serjeants' Inn—viz., Serjeants Vaughan and Wilde. In the libel complained of Dr. James Johnson alluded to Wakley as an "outcast of medical society," who had been "accused of arson, convicted of libel, and cast in damages in a Court of Equity." These remarks alone would have been sufficient material upon which to base an action; but Dr. James Johnson, who had two long years of adverse criticism to answer, went further and elaborated his unpardonable phrase, "accused of arson." In the following sentence the cruel calumny of Argyll-street was raked up:—

"The threatened expulsion of Lucifer from the presence of the Gods on high Olympus," he wrote, "spread terror among the inhabitants of the lower regions; but happily they were spared a visit from this *firebrand*, or rather *fire factor*, as he is now generally denominated, who willingly, for once, made his exit from the postern gate."

This passage, which purported to describe a wholly imaginary movement on the part of certain infuriated members of the Royal College of Surgeons to expel Wakley from the gallery of the council chamber while he was speaking therefrom, was supplemented by an explanation of the term "Lucifer":—

"The common derivation of this word is wrong," runs the footnote; "it is not from *lux* and *fero*, but from *ignis* and *facio*. (*Vide* Secret Memoirs of the House of Argyll.)"

Mr. Denman made the most of the cruelty of these allusions, and of another in the same article in which the public were invited to consider "a new mode of lighting the streets without lamps and of extinguishing debts by means of fire-engines." He showed that the wicked rumours concerning the fire in Argyll-street which had been aroused by the withholding on the part of the company of the sum insured had been definitely disproved, that in a court of law no evidence whatever had been brought forward by the Hope Fire Assurance Company in support of the absurd suspicion, and that the Company had paid Wakley's claims in full.

The defence chiefly rested on Serjeant Vaughan's attempt to demonstrate to the court the known libellous proclivities of the plaintiff. Chief Justice Best paid no attention to this *tu quoque* argument (if argument it could be called), and in his summing-up said that there could be no doubt at all that the matter complained of was libellous. He instructed the jury, however, to take into account in assessing damages the aggravation and provocation which the defendant had received before he overstepped the bounds of legitimate controversy. The jury, after two minutes' consultation, found a verdict for the plaintiff for £100 and costs.

A second action brought by Wakley on the same day against the printer of the *Medico-Chirurgical Review* was settled by a compromise, Wakley being reimbursed all costs. After this action the war in words was continued for some time in both papers, but not with the spirit or bitterness with which it had opened. Eventually the quarrel died out. The *Medico-Chirurgical Review* had a longer life than the *Medical and Physical Journal*, for it did not cease to appear until about 1850, and THE LANCET interfered but little with its success from a business point of view. When it was apparent that no profit could come out of quarrelling both editors would seem to have decided to bury the hatchet.

The *London Medical Repository* was another quarterly medical journal, and was edited by Dr. James Copland, F.R.S., the author of the Medical Dictionary and a man of great scientific attainments. Dr. James Copland, who had himself with some success played the part of medical reformer, ranged his forces on the side of Wakley's foes, though he is said to have come into line with his fellow editors in opposing Wakley not through conviction but through the inadvertency of a sub-editor. As a consequence, however, of some words in slight of THE LANCET that appeared in the *London Medical Repository* that paper was nicknamed The "Mausoleum" by Wakley, and the dulness of its erudition and the staleness of its contents were weekly held up to ridicule. Dr. James Copland was a physician and a man of science, but no journalist. Nor did he want to quarrel. The quarrels were ready made when he blundered into them, and the abuse that he got was not directed personally at him, but at the causes that he was conceived to have espoused. His paper soon perished under the attacks of his foe and the successful rivalry of his friends, and he betook himself to the more congenial labour of writing his well-known dictionary.

Yet one more paper must be mentioned, as its life was longer than any of those to which allusion has been made, and its opposition to Wakley more distinct, more bitter, and more effective. This was the *Medical Gazette*.

The *Medical Gazette* first made its appearance in December, 1827, and in its address to its public avowed its hatred of and strenuous opposition to the policy of THE LANCET. The paper was started by Brodie, Abernethy, and other hospital surgeons, who bore a bitter and very intelligible grudge against Wakley, and Dr. Roderick Macleod left the *Medical and Physical Journal* to become its editor. Wakley declared that the only object of the paper was obviously to oppose, and if possible to ruin, THE LANCET, because THE LANCET had so ruthlessly interrupted the even tenour of the lives of the great men of the profession. The following passage from its preface denotes the attitude of the new paper towards the question of the publication of lectures and was accepted at once by Wakley as a formal declaration of war.

"A few years ago a set of literary plunderers broke in on the peace and quiet of our profession. Lecturers who had spent their lives in collecting knowledge, arranging it for communication, and acquiring the difficult art of oral instruction, saw the produce of their lives suddenly snatched from them and published for the profit of others, with the additional mortification of finding what they had taken so much pains with disfigured by bad English and ridiculous and mischievous blunders."

THE LANCET was not behindhand. The outward resemblance of the new newspaper to THE LANCET was very great, while all the editorial inspiration had been borrowed from Wakley. "Some despicable imitations of us have arisen," said Wakley, "and *stunk*, and become extinguished ..... one or two are still *emitting a little factor*." In the very first year of its existence the *Medical Gazette* published thirty more or less bitter attacks not only on THE LANCET but on Wakley, while for three years a steady fight was maintained between the rival papers. The *Medical Gazette's* method of attacking THE LANCET was fairly effective and very safe. Every week THE LANCET was searched for grammatical errors, solecisms, or failures in taste, and any treasure-trove was quoted as "wit," "veracity," "refinement," "good English," and the like. Later in its course, which was long and fairly successful, the *Medical Gazette* came into more violent contact with Wakley, but the account of this belongs to a later era. It was at first offensive but timid.

(To be continued.)

THREE YEARS OF MY LIFE UNDER THE SOUTHERN CROSS.

BY THOMAS LOWE LAXTON, L.R.C.P. EDIN., M.R.C.S. ENG.,
SURGEON TRANSVAAL STATE ARTILLERY.

LEAVING the River Thames by steamer on Nov. 9th, 1892, I arrived at Durban on Dec. 6th, and after spending a few weeks in that beautiful town I obtained the post of resident surgeon to Grey's Hospital, Pietermaritzburg, also in the colony of Natal. My patients here were of every race, nationality, and colour. The Kaffirs display marvellous recuperative powers after even the most severe injuries, especially of the head, their skulls being remarkably thick and dense; but when they are attacked by disease of an acute type their power of resistance compares most unfavourably with that of the whites. I was particularly struck with the frightful ravages that syphilis has made and is making amongst the natives, especially among the Zulus in Natal since the death of Cetewayo, under whose government the punishment for contracting syphilis was death either by impalement on a stake or burial alive. Pregnancy occurring in an unmarried female was also under the same regime punished with death. I noticed also that syphilis was virulent amongst the natives when it had been contracted from a white person and also among the white men infected by native women. Among the children of the natives scabies when neglected produces very severe effects, such as large suppurating sores, ulcerations of the skin, and general emaciation. After leaving Pietermaritzburg I spent six months at Barberton, where malarial fever is common, although neither so prevalent nor so severe in type as formerly. I then, in company with some friends, set out by waggon for Buluwayo in Matabeleland, which was then very little developed, but on arriving in the middle of June, 1894, at Pietersburg, a town in the north of the Transvaal and on the main road between Pretoria and Buluwayo, I found that military operations against the Kaffir chief Malaboch were in progress and that medical assistance was needed. I therefore volunteered my services, being anxious to see the Boers on the war-path, and to gain an insight into commando life and Kaffir warfare generally. The commandant-general, P. J. Joubert, of Majuba and Langs Nek fame in the English war, received me most courteously and I immediately went to the front. The enemy's position was on the top of a high mountain called Blaauwberg, and it took us four hours' hard climbing to reach it, but the labour was well repaid by the beauty and grandeur of the scenery. The campaign had been conducted with only partial success owing to the physical difficulties of the situation and to the unwillingness of the commandant-general to risk the lives of his men in attempts to rush the positions occupied by the rebels, but want of food and water compelled them to surrender during the last days of July, and early in August the camp was broken up and we returned to Pietersburg. Between thirty and forty were killed on the side of the Boers in this small campaign, besides several of the native allies.

[Operations were almost immediately resumed against a number of petty chieftains, including Modjaji (the celebrated "She" of Rider Haggard) and Magoeba. The latter held out the longest, but was killed about the middle of June, 1895.]

The natives are marvellously resourceful in their treatment of fractures, applying numerous small sticks closely woven together by string or stout grass and binding them firmly round the limbs after the fractured ends have been placed in apposition. Immediately after the termination of the campaign against Magoeba I was sent by the Transvaal Government as medical officer to the famous warm baths at Waterberg, some eighty miles north of Pretoria. This water has a very high reputation amongst the Boers, and I must admit, both from my own experience and that of others, that its medicinal properties are of no common order. I have seen marvellous effects produced by it in cases of gout, rheumatism, lithiasis, intractable neuralgias and neuroses, callous ulcers, wounds of long standing, and various forms of bone and joint disease, especially of a scrofulous origin. I have not been able to obtain an analysis of the water, but I am given to understand that it contains an unusually large proportion of lithia salts. The water rises abundantly and with great force and is nearly at the boiling point.

In the beginning of October of last year I was appointed surgeon to the State Artillery with the rank of captain, and for my services to the Government was made a full burgher of the Transvaal. Since then I have witnessed the defeat and capture of Dr. Jameson and his troopers at Doornkop, near Krugersdorp, particulars of which are so recent that I need not enter into details beyond stating that I was the Government medical officer placed in charge of the officers and men while prisoners in this country, and that all the wounded when sufficiently recovered were handed over to my care for transference to the Imperial authorities at the Natal border. Most, if not absolutely all, of Jameson's wounded were struck by Martini-Henry bullets, while the few burghers that were either killed or wounded—nine in all—were struck by Lee-Metford ammunition (Maxim gun or rifle). The majority of Jameson's men were wounded in the extremities. Fifteen received bullets in the right side of their bodies—namely, one in the jaw, two in the upper extremities, and twelve in the lower extremities. Eight were wounded in the left side, three in the upper extremities, and five in the lower. Three men were also wounded in the back and one through the bladder and intestines; of the remainder some were suffering from fractures, dysentery, abscesses, &c., and injuries not due to bullets. Three of the troopers underwent amputation—one above and two below the knee. Of the wounded burghers who were brought into hospital one had his brain traversed by a bullet, but nevertheless survived for ten days, one was wounded through the abdomen, one through the right lung, and one through both hand and lung; there were also five suffering from illness and injuries not caused by bullets. Considering the amount of ammunition expended by Jameson's column it is marvellous how few casualties occurred among the Boers—a result which was not due to bad shooting, but to the careful manner in which the burghers seek and obtain cover. Several of Jameson's troopers told me that the magazines of their rifles were practically useless, for the least portion of rust, dirt, or grit renders the mechanism unworkable; the rifles also became so hot that they could not be grasped with the hand, and some of the older men said that they longed for the Martini-Henry rifle which they had previously used.

IMMUNISATION AGAINST SERPENTS' VENOM AND THE TREATMENT OF SNAKE-BITE WITH ANTIVENENE.

BY T. R. FRASER, M.D., F.R.C.P. EDIN., LL.D. ABERD., F.R.S.,
PROFESSOR OF MATERIA MEDICA AND CLINICAL MEDICINE AT THE UNIVERSITY OF EDINBURGH.

PROFESSOR FRASER delivered an interesting address before the Royal Institution of Great Britain on March 20th. His subject was Immunisation against Serpents' Venom and the Treatment of Snake-bite with Antivenene, and the following is an abstract of his remarks:—

Traditions originating at a remote period and statements contained in the narratives of travellers—several of which were quoted—strongly suggest that human beings may acquire a power successfully to resist the toxic effects of serpents' venom. There is evidence, further, that venomous serpents are themselves protected to a considerable degree against their own venom and that of other serpents. These statements suggested to the lecturer the importance of experimentally investigating the subject, for if they were proved to be correct results would be obtained likely to be of value in the treatment of snake-bite in man. Some twenty years ago the collecting of venom was begun for this purpose, and soon facts were obtained which showed that by the administration of a succession of minute doses of venom animals became able to resist a lethal dose without any distinct injury. The first supplies of venom failed at this point and the investigation was not resumed until several years afterwards. In the meantime, the results of experiments on the toxines of disease had suggested to others that serpents' venom might, like those toxines, be able to produce protection in animals. Starting with Sewall's experiments of 1886, an account was given of the work of other investigators, until those of Phisalix and Bertrand, made in 1893, and of Calmette, made in 1894, were described. The lecturer chiefly used the

venom of the cobra of India in his experiments, but the leading experimental results obtained with it were reproduced with the venoms of several serpents of Australia, Africa, and America. The minimum lethal dose for a number of animals was first defined, and the protection was produced by a series of gradually increasing doses, until rabbits were able to receive, without injury, fifty times the minimum lethal dose, and in the course of five or six months a total quantity sufficient to kill 370 animals of the same species and weight. The blood-serum of these animals, called by the lecturer "antivenene," was next tested as an antidote, and having been found to be efficacious the limits of its antidotal power were defined in several series of experiments. The results appeared to justify the opinion that the antidotal action is a chemical and not a physiological one. The question—bearing also upon the antitoxins of disease—of the origin of this antidotal substance was discussed. In connexion with it the lecturer stated that he had found that by the stomach administration of antivenene, and more remarkably of cobra venom itself, an antivenomous substance could be introduced into the blood in a quantity sufficient to prevent death after the subcutaneous injection of more than the lethal dose of venom. Experiments were described in which from 500 to 1000 times the subcutaneous lethal dose of venom were introduced into the stomach of animals, and although no definite toxic symptoms were produced by these enormous quantities still the animals had become so far protected that within a few hours afterwards they were able to receive with almost no injury a dose of venom injected under the skin one-half larger than that which was able to produce death. These facts suggest that the antivenene is actually a normal constituent of the venom itself, and that the venom while in the stomach had been subjected to a process of analysis, whereby the poisonous constituents had failed to be absorbed into the body or had been destroyed, while the constituent or constituents which are antidotal had passed into the body in sufficient quantity to protect the animals against otherwise lethal administrations of venom. The measures to be employed in the treatment of snake-bite, including the administration of antivenene, were finally explained, and it was concluded that by its use human life could be saved in a considerable if not in a large proportion of cases that would otherwise terminate in death.

THE HISTORY, METHODS, HINDRANCES, EXPENDITURE, AND POLICY OF THE CIVIL RIGHTS DEFENCE COMMITTEE.

(*Continued from page 1090.*)

EARLY in 1894, on the initiation of the West Indian Alliance, the Civil Rights Defence Committee was formed. On March 5th a deputation of members and friends of the Alliance and of gentlemen not connected with the Alliance but who were interested in the successful vindication by Mr. Anderson of his own rights and in the establishment of the principles and rights of general and public interest to be upheld by Mr. Anderson in his appeals to the Judicial Committee of the Privy Council was organised to enlist the coöperation of the London and Counties Medical Protection Society in supporting Mr. Anderson and enabling him to prosecute the appeals to the Privy Council to obtain a reversal of the decisions in the cases of Marshall and Wife, Frank and Taylor. In reply to the deputation the London and Counties Medical Protection Society adopted resolutions that the decisions in the suit of Marshall and Wife *v.* Anderson are such as to seriously and unjustly affect the freedom of action of medical men in the practice of their profession and are matters of concern to all medical men, that it concerns the honour as well as interests of the profession to support the appeal of Mr. Anderson to the Privy Council, and that the proceedings in Trinidad were opposed to the absolutely assured rights of British subjects, and advised the nomination of a committee to issue an appeal to the medical profession. This led to the formation of a joint committee composed of members nominated respectively by the London and Counties Medical Protection Society and the West Indian Alliance, which issued invitations to public bodies to send representatives to the Committee, and in response to these invitations the British Medical Association, the West London divisions of the London and Counties Medical Protection Society and the Incorporated Medical Practitioners' Association, the West Indian Union, and the Trinidad and Dominica branches of the Union nominated representatives to the Committee. Shortly afterwards the Council of the Royal College of Surgeons of England also sent two representatives. The first appeal was issued by the Committee to about 1500 of the leading men in the profession, the amount of individual subscriptions being limited to 1 guinea. Subscriptions to the amount of £120 came in, and many strong expressions of opinion that the wrongs done vitally affected the honour and interests of the medical profession. After this, as further subscriptions came in slowly, Mr. Anderson, with the full approval of the Committee, appealed personally in August and September, 1894, to every Fellow of the College—about 1100 in number on the Register—bringing in about 35 guineas at a cost of £15 to £18. Some votes were passed by branches of the British Medical Association, and some subscriptions raised amongst members of branches. In April, 1894, Mr. Anderson gained the verdict of a Middlesex special jury for £500, Lord Coleridge entering judgment for the defendant on the ground that the action did not lie against a judge, and this judgment was confirmed in August by the Master of the Rolls, Lord Esher, and the Court of Appeal. When this judgment in Anderson *v.* Gorrie was pronounced by the Appeal Court, the Committee took this serious violation of Mr. Anderson's rights into consideration, and came to the conclusion that the best way of dealing with it would be by forming a new and powerful committee. The next important measure was the preparation of a formal report, under the title of an interim report, giving the investigations of the Committee and its conclusions with much of the evidence on which they were based together with the very strong opinions of the medical papers, professional public bodies, and professional men—an extraordinary weight of authority and opinion. The report was issued under the date Dec. 4th, 1894, but not struck off till later.

On Dec. 18th a printed letter from Lord Stamford giving a *précis* of the case and strongly appealing to the public for support was sent to two hundred and fifty leading newspapers in London and the provinces, but excepting a brief abstract in the *Times* and short notices in a few other papers it did not receive insertion or comment. Finding that the subject of judicial immunity was little understood or appreciated Mr. Anderson prepared with the approval of the Committee a short review of the subject with authorities, and it was published by the committee under the title of "The Doctrine of Judicial Immunity." Shortly afterwards "An Appeal to Public Men and Public Bodies" was prepared and published. Copies of the "Interim Report" "The Doctrine of Judicial Immunity," and "The Appeal to Public Men and Public Bodies," with a covering letter from Lord Stamford multiplied in the office, were sent to all the corporations and all the guilds, about eighty in number of the City of London, to every member of the House of Lords and House of Commons and to about 400 leading barristers, with apparently very little result either in moral support or funds. Just before the issue of the interim report THE LANCET had inserted a most earnest appeal for help in the work of the Committee and had opened a fund, heading it with a subscription of 10 guineas, but only one subscription of 5 guineas followed.

Efforts were next made to enlist the interest of some of the leading London papers. The *St. James's Gazette*, *Pall Mall Gazette*, and *City Press* consented to receive deputations headed by Lord Stamford. Upon this the *St. James's Gazette* and *Pall Mall Gazette* inserted an appeal from the Committee signed by Lord Stamford and many members, accompanied by a strong paragraph in support of the appeal. This resulted in a subscription of 10 guineas from a member of the jury who tried Mr. Anderson's action and a few other subscriptions also continued to flow in. As soon as Mr. Anderson became aware that when Lord Esher had adjudicated in his appeal Mr. Yeatman's action against Lord Esher was in progress he took legal opinion and was advised that the proper course was to move the Court to set aside the decision as voidable and to re-enter the appeal for hearing. Accordingly, at the end of July and beginning of August, 1895, he gave notice of his motions (1) to set aside as voidable the judgment of the Court of Appeal, and (2) on that motion being struck out of a motion to reinstate it in

the list, but this last was not even allowed to be placed on the list. During the short August Session of Parliament Mr. Anderson, by means of letters of introduction, interviewed many Members of Parliament and eventually succeeded in arranging a conference for Aug. 29th. The British Medical Association sent a shorthand reporter, and the Committee printed the report. The conference greatly strengthened the Committee and has been one of the causes of quickened interest in its work. As Mr. Anderson was placed in a very difficult and embarrassing position in applying to the Court of Appeal to constitute a court without Lord Esher the Committee invited the attendance of all members when Mr. Anderson's motion came on on Oct. 24th. Four were able to attend—viz., General Graham, Mr. Ross Clyne, Mr. Greenberg, and Mr. Rivington. This was a fortunate circumstance as the adverse decision of the Court of Appeal, which included the Lord Chancellor, might otherwise have alienated some of Mr. Anderson's supporters; but, as it is, the testimony of the delegates to the courteous but firm demeanour of Mr. Anderson in the face of a very trying ordeal has increased the general interest in his case.

In July, 1895, the Committee had published its second interim report, and at the end of the year the third interim report was issued giving many important press notices and carrying the work of the Committee up to date. The third interim report dealt also with the refusal of the Court of Appeal to hear Mr. Anderson's motions. It has since been enlarged and been issued as a second edition. Through the agency of General Graham the Committee were able to invite the coöperation and support of the Torquay Medical Society. Draft resolutions were suggested for adoption and also a form of memorial for signature soliciting the assistance of the Member of Parliament for that division. In response to this appeal the Torquay Medical Society gave a vote of £5 from its fund, raised £13 amongst its members, and obtained numerous signatures to the memorial to Captain Philpotts, its representative in Parliament. It also communicated its cordial good-will to the Devon and Exeter Medico-Chirurgical Society, which a little later voted seven guineas from its funds and twenty-two guineas were subscribed by the members individually. The members also memorialised their Member of Parliament. St. Mary's Hospital Medical School, where Mr. Anderson was a pupil, voted five guineas to the fund.

The next step, and one which brought great accession of strength, was a deputation inviting the Association of Fellows of the College to join the Committee. The proceedings, a short notice of which appeared in the *Times*, are given at length in the second edition of the third interim report. The Association appointed representatives on the Committee who have added to its working influence.

The forms of resolution and memorial above referred to were afterwards further elaborated and, with a draft letter to Members of Parliament, were submitted to the President and Council of the British Medical Association, and the same letter, resolutions, and memorial were sent to the constituent bodies. The Council of the British Medical Association at their meeting on Jan. 15th, 1896, resolved: "That a copy of the report of the Civil Rights Defence Committee be forwarded to the branches, together with copies of the resolutions and draft suggestions referred to." Six hundred copies of memorials to Members of Parliament, each with five of the letters inviting constituents, both lay and medical, to sign the memorials, have been delivered to the general secretary of the British Medical Association to enable the resolution of the Association of Jan. 15th, 1896, to be carried out. Several branches of the Association have passed the resolutions and are obtaining signatures to the memorials to their Members of Parliament. The course adopted by the Shropshire and Mid-Wales Branch and ably carried out by Mr. Cureton, the president, is one that affords the best prospect of success. Mr. Cureton addressed each Member of Parliament in the area of his branch, he interested the mayor of Shrewsbury, and he secured an admirable article in the *Shrewsbury Chronicle*. This, it is hoped, will be followed by the signing of memorials, both by medical men and laymen, in every division and borough in the area of the branch. It is very essential to secure the coöperation of medical men in obtaining the signatures of laymen. Few men are in a better position than medical men to do this, and at present the Committee, though obtaining other help when possible, has in few places anyone on the spot to whom it can personally appeal for help except medical men.

The forms of memorial have also been printed for general use by medical men and laymen throughout the United Kingdom, and many have been taken charge of by active friends for signature. Each member of the Committee has been asked to take charge of one and obtain signatures to it for the Member of Parliament in his district. A tabulated statement of the memorials which have so far been sent to Members of Parliament or are in course of signature is kept by the Committee, and every effort is made to keep these lists correct and complete up to date.

Special forms and invitations to convene public meetings in their constituencies were framed for Mr. Cohen, M.P. for East Islington, and Mr. Kimber, M.P. for Wandsworth, who had both expressed themselves strongly in favour of the objects of the Committee. The very energetic measures taken in East Islington are calling widespread attention to the matter and arousing general interest in that constituency. The executive committee of the Liberal Association received Mr. R. B. Anderson. He addressed them personally and the members as individuals signed the memorial to Mr. Cohen. The memorial has also been signed at the Mildmay Radical Club. In Wandsworth several invitations to Mr. Kimber to convene and preside at a public meeting have been signed.

Debates upon the questions arising out of Anderson *v.* Gorrie have taken place in the Hampstead Parliament and the Gray's-inn Debating Society. At the latter Mr. Copeland, Mr. Bellot, Mr. Degazon (of St. Lucia, British West India), and Mr. Pereira (of Ceylon) all delivered powerful speeches in support of a motion affirming the necessity, in the public interest, of appeal to the House of Lords in Anderson *v.* Gorrie. General Graham attended and spoke on behalf of the Committee. The motion was carried by a large majority. Mr. Bellot, who took part in the debate, has contributed an important article on the legal aspects of Anderson *v.* Gorrie to the *Westminster Review* in the numbers for March and April. He has reviewed all the previous cases in which actions have been brought against judges and has shown clearly that the doctrine of absolute judicial immunity has sprung up within the last few years.

Other efforts have been made by Mr. Anderson himself to inform the public mind and to arouse interest in the general community. Among these the following instances are deserving of record. Towards the end of 1895 very staunch friends of Mr. Anderson, Mr. and Mrs. Mann, the latter from Lincolnshire, proprietors of a large confectionery business, well acquainted with his family and himself in boyhood, very kindly afforded to Mr. Anderson an opportunity of addressing their operatives at their factory in the Wandsworth-road. The operatives are not combined in any organisation, but individually they were interested and most sympathetic. Mr. and Mrs. Mann and clerical staff took charge of memorials to their Members of Parliament and are obtaining signatures to them.

Early this year (Jan. 23rd) one of the fraternities of printers, or, as they are termed, the father and chapel of Messrs. Strangeways and Sons, printers, Tower-street, W.C., who had had their interest aroused in Mr. Anderson's case in the course of printing the various reports and issues of the Civil Rights Defence Committee, received Mr. Anderson. Mr. Williams, the father of the chapel, pointed out that the rights Mr. Anderson is defending are the rights of all. "They are," he said, "rights that we possess under Magna Charta and the Bill of Rights—and these rights, these great charters, are attacked and endangered in our courts." After an excellent speech from Mr. Anderson the following resolution was moved, seconded, and unanimously passed: "That this meeting of the employés of Messrs. Strangeways and Sons, printers, is of opinion that the judgment of the Court of Appeal reversing the verdict of the jury *given after a fair trial* in Dr. Anderson's case is subversive of the rights and liberties of the subject, and, with the circumstances under which it was given and upheld, demands the immediate and careful attention of Parliament as a public grievance before supply, and the punishment of all responsible; and the members of this chapel in meeting assembled pledge themselves to use what influence they possess with their representatives in Parliament to obtain a reversal of this illegal judgment." Twenty-two of the employés took charge of memorials all in separate divisions and have been obtaining signatures among the twenty-two constituencies. The chapel undertook to inaugurate a penny subscription throughout the trade numbering nearly a million and a half. If this subscription is successful it would bring in a considerable sum in defence of the rights involved in Mr. Anderson's case. The chapel have also delivered 500

copies of the memorials, with 500 copies of the third interim report and 1500 reports of their reception of Mr. Anderson, to delegates attending a great meeting of compositors at the Memorial Hall, Farringdon-street. This cost 13*s.*, by post it would have been less effectively done for £4.

Other measures for insistance on the rights involved and for compelling the attention of public men and of Parliament are in progress. Mr. Anderson drew up a petition to the Queen praying for investigation and redress. After two well-attended meetings and very full consideration the Committee decided not in any way to fetter Mr. Anderson's discretion, and the petition has been sent in. A petition to the House of Commons has also been prepared praying for a vote in aid of the appeals and that the petitioners may be heard at the bar of the House of Commons.

(To be continued.)

THE NEW PHOTOGRAPHY.

IN regard to the investigations made in THE LANCET laboratory there is little advance so far to report. We have made a few experiments with the modified process announced in our issue last week, but though in the case of the hand and fingers the requisite exposure is considerably shortened yet it does not appear to answer for thicker parts. It is curious, however, that prints are obtained at all, since the modification consists in placing the negative with the film side down upon fluor-spar. Mr. Strauss Collin of 15, Copthall-avenue, E.C., has placed at our disposal some new negatives which are said to produce images of the thicker parts of the body in five seconds, whilst excellent pictures of the arm, wrist, &c., with good detail may be obtained in a few seconds. So far as our experiments have gone the results have been to some extent confirmatory of this statement. The negatives are of thin zinc sheeting, upon which is placed the sensitive film, which, in addition to silver salt, probably contains a fluorescent substance. The development of the image is peculiar, the ultimate result being a positive resembling a ferrotype.

In response to numerous inquiries as to the apparatus necessary for obtaining good results we may state that all that is required is a focus tube of the pattern first designed by Mr. Jackson of King's College, and an induction coil giving a three-inch spark, and an accumulator such as that supplied by the Lithanode Company. The photographic plates should be specially rapid. The focus tubes are not so difficult to obtain as they were some weeks ago, and they are not quite so expensive now that several makers are supplying them. Messrs. Griffin and Co. of 22, Garrick-street, Covent-garden, W.C., have sent us a tube for trial costing 27*s.* 6*d.* It gives excellent detail and a fine sharp image with a few minutes exposure when placed at the proper distance above the negative. This distance should, whatever tube is being employed, be ascertained by use of the fluorescent screen, which will show at once the point at which the best definition is ensured. The tube submitted to us answered admirably with the potassic platino-cyanide screen. We have also had occasion to experiment with an induction coil supplied by this firm. It costs £9, and with a four-cell Lithanode accumulator gives nearly a four-inch spark discharge in air. It furnishes a very steady current when the contact-breaker or hammer is properly regulated, which may be done with ease and exactness by means of two screws. The coil is, in fact, just fitted for the requirements of the focus tube without exposing it to the risk of over-heating and probable destruction.

No new departure, save in brevity of exposure, enables us to give our readers illustrations showing that any marked development has taken place as far as medical and surgical utility is concerned. As many people are now employed in experimenting in radiography methods have become perfected, but that is all. We have had submitted to us a very great number of photographs. The one here reproduced was taken by Messrs. Brady and Martin, manufacturing and analytical chemists at Newcastle-on-Tyne. The patient was sent to them by Mr. Page, the precise nature of the injury to the forearm being at the time uncertain. As will be seen the new photography immediately revealed the site and position of the fracture, and the usual treatment was at once employed. We have reduced the negative submitted to us considerably in scale, but the illustration still shows the extreme utility that the process had. It has been our aim in the series of notices which we have written on the new photography to confine our attention almost entirely to cases where this practical utility could be ascertained. The Roentgen photography was only a curiosity in physics for a few days. The occurrence of the phenomena having been established, professional interest in them depends entirely upon their practical utility.

Messrs. Brady and Martin have also sent us a very good photograph of a needle buried in a patient's hand. The locality of the foreign body had not been ascertained until the photograph was taken, when it was immediately cut down upon and removed by Mr. Ingram of Newcastle.

Mr. Stanley Thomas, casualty surgical officer to the Middlesex Hospital, has sent us also a photograph which constitutes a good example of the success of the new process as an aid to diagnosis. He writes as follows:—"As an example of the great success of Professor Roentgen's method of photography as an aid to diagnosis, I think the following case may be of interest to the readers of THE LANCET. On Feb. 29th a woman aged twenty-six years ran a portion of a needle into her right hand; it entered the web of the hand on the palmar surface at the base of the ring finger. The patient came to the Middlesex Hospital on the evening of that day and was seen by Mr. A. E. Griffin, the house surgeon on duty. He could not detect the presence of the needle, and as the patient was suffering a considerable amount of pain he applied a hot boracic fomentation. I saw the patient afterwards daily and made several careful examinations of the hand, but could feel nothing, so the treatment of fomentations was continued on account of the pain, which was constant. There was no swelling, but the patient could not flex her finger. On March 10th she had her right hand photographed by Mr. Friese-Green, of King's-road, Chelsea, and the following day she brought the photograph to me and begged me to explore her hand. This photograph showed a distinct shadow across the proximal end of the first phalanx of the ring finger. I again examined the hand very carefully,

but could detect nothing, but as she was still suffering considerable pain and was unable to flex the finger I determined to make an exploratory incision and at the same time told the patient not to be disappointed if I found nothing, as I was still unable to feel any unusual resistance in the palm of the hand. I rendered the limb bloodless by an Esmarch's bandage and applied a tourniquet. Dr. A. H. Lister kindly gave the patient nitrous oxide gas and I made an incision in the palm parallel to and along the ulnar side of the first phalanx of the ring finger, the knife struck the needle, and with a pair of Spencer Wells' forceps I extracted a portion of a needle half an inch long. I am greatly indebted to Mr. Friese-Green for the photograph, which has thus enabled me to relieve my patient."

Mr. Robert Jones has sent us a photograph of the hand of an infant aged six months, the hand having a double thumb. The hand and fingers were held on to the plate protected by an aluminium sheet, and the exposure was three minutes. The photograph of the erring digit is very distinct and shows that the abnormality followed the almost universal rule that the outer digit was the supernumerary one. We do not reproduce the photograph, which is an excellent one, because the little diversity could have been detected without the aid of the process, but the case is worth mentioning as indicating the possibility that the processes of ossification could be observed in their gradual stages by the Roentgen method. The photograph was taken by Professor Oliver Lodge.

Dr. Victor A. Corbould has forwarded to us an admirable photograph of the left leg of a child with a needle embedded in the calf. The photograph was taken by the Electrical Standardising, Testing, and Training Institution, Charing-cross-road, and for precision of detail is one of the most remarkable that we have yet seen. Gradations in the shadows show not only the outlines but the contours and different planes and surfaces of the bones. The needle is shown to be deeply embedded in the calf an inch from the skin. The story of the case as narrated to us by Dr. Corbould is as follows: "A child aged two years was brought on March 16th, 1896, to the Children's Hospital, Paddington-green, her mother having noticed, two days previously, a swelling in the child's calf. The tumour, which was about the size of a five-shilling piece, was on the back of the left leg rather to the tibial side and was at the level of the junction of the middle and lower thirds. There were two slightly reddened patches over the lower portion of the growth, which felt solid and had ill-defined margins. The skin was not adherent and the growth was movable on the deep structures. There was no fluctuation. The child had complained of pain when her shoes were being put on and had sometimes fallen suddenly complaining of pain at this spot. About two months before Christmas she had suddenly cried whilst playing on the floor and was put to bed in the middle of the day because she seemed to be in pain. She slept well, but again complained of pain in the leg on being taken out of bed in the morning; however, during the course of the day she seemed to become quite well, and nothing was noticed except occasional falls associated with pain in the left calf until March 14th, when the swelling was first noticed. Thinking of the possibility of a foreign body having entered the limb I got the mother to bring the child on March 21st to Faraday House, Charing-cross-road, where a room had been specially fitted up for the purpose, and, with the kind assistance of Mr. H. H. Powles, an admirable illlustration was obtained by means of Roentgen rays. The original photograph is upon a whole plate—and two were taken in slightly different positions. The exposure of one was five minutes and the other six minutes. They show a needle lying deep to the gastrocnemius and between it and the soleus,[1] the fat investing the limb is also shown. From the appearance of the two photographs one was able to guess that the needle had had its eye broken off. Armed with these results on the following Monday a curved incision was made over the centre of the growth and the pointed end of a needle was seized with sinus forceps. I am indebted to Mr. F. Wallis (to whom the child was brought) for his kind permission to publish this case." The utility of the process in this case is indisputable.

Mr. Lynn Thomas of Cardiff has also sent us some interesting photographs which he has taken in illustration of the relative penetrability of the "x" rays through various tissues and other objects. One photograph is the right hand of a gentleman who had his right thumb torn off when he was two years of age. It shows that the epiphysis of the proximal phalanx was left, and also the two sesamoid bones of the flexor of the thumb. It is interesting to observe that the sardonyx in the gold ring on the ring finger allows the bone to be distinctly visible through it, and that its outline is on the same plane as that of the bone on either side of the ring. Upon another plate are shown three vermiform appendices removed from cases of perityphlitis. One of these had five faecal concretions in it; they were fixed on a needle and appear black in the reproduction, probably from rust, because the only concretion not pierced by the needle is to be seen at the left end of the appendix as simply a darker impression than that of the appendix itself. A second shows the appendix enormously thickened, the wall being almost impenetrable to the rays, though the exposure was the same as in the previous example, where the wall was nearly transparent. The third is a distended appendix tied with silk at the right hand end. There is evidently nothing in it but fluid, and there is no impression left by the silk on the plate. Another object on this plate is a kidney with three calculi and débris in it. The kidney has not been incised, and the exact localisation of the calculi or even their existence is not very obvious. The last object on this plate is the most interesting. It is the gizzard of a cock laid open tranversely, having a needle in it projecting beyond it for half an inch. "This cock," writes Mr. Lynn Thomas, "during life was known as the 'one that cannot crow,' and from curiosity to find out the cause of his futile attempts at crowing I found that the explanation was the needle in his gizzard. It had penetrated the left lobe of its liver and was half-way out through the anterior abdominal wall. A little reflection upon the condition of the needle during the proud attitude assumed by the bird in crowing will at once explain the discomfort it felt." The third plate presents examples of various calculi. Five of them are vesical calculi, laminated, and formed of uric acid, urates, and oxalates. They are very opaque and there is no difference in their relative opacities. A sixth object is a renal calculus consisting of pure crystalline uric acid. This also is opaque up to its thin edge. A seventh is a little collection of gravel which had been passed per urethram. The last two objects are gallstones removed from the same patient, one from the gall-bladder and one from the ileum. The latter caused fatal intestinal obstruction, although it got through the bile duct without much trouble. The calculus removed from the gall-bladder is very interesting; the stone itself is almost circular and smooth externally, but in the negative there can be seen distinctly the concentric laminations of its structure as well as the faint radiating structure of the individual strata. Mr. Lynn Thomas's three plates form a very interesting record of work, for it is clear to everybody that the most practical development in the process that can take place to render the method of utility in our profession is work in the direction of ascertaining *the comparative density* of different structures.

Dr. Mackenzie Davidson has sent us some interesting reproductions of bullets within the cranium, showing that the vault of the skull is quite transparent to the "x" rays under an exposure of ten minutes or so.

[1] Owing to the difficulty of keeping the child quiet, spasm occurring during exposure, the outline of the needle is double.

PRACTICAL APPLICATION OF THE ROENTGEN RAYS IN SURGERY.

At a meeting of the British Laryngological Association, held on the 17th inst. at the rooms of the Medical Society, Chandos-street, Dr. John Macintyre of Glasgow gave an interesting address on the Practical Application of the Roentgen Rays in Surgery, with special reference to Affections of the Ear, Nose, and Throat. He related the history of his experiments in connexion with the employment of the "x" rays in the examination of the various parts of the body and showed on the screen the results of the advances made by him during the past three months. His first photograph, taken shortly after the publication of Roentgen's paper, was obtained after an exposure of forty minutes, and the last with an exposure of only half a second. He desired to emphasise the title of his address, as the most important use of the rays in surgery had been overlooked, as it was not so much for the purpose of photography that it ought to be employed, but for the examination of the various parts of the body by means of cryptoscopic screens, the use of which was demonstrated to the audience. Thanks to the advice and valuable assistance of Lord Kelvin and Mr. Bottomley of Glasgow University Dr. Macintyre has

been able to determine the best apparatus for the purpose. Firstly, secondary cells, with a current of from six to eight volts and from four to six ampères were necessary; secondly, a coil giving a spark of from two to three and a half inches; and thirdly, a good Crookes's tube which he considered the most important element, as improvement in results would be according to improvement in these tubes. He found that the best results were obtained by a tube of Newton's shape, in which the vacuum residue is about $\frac{1}{1\,1\,7}$th of a million, the kathode consisting of a concave piece of aluminium, and the torrent passing directly across to the anode, which consists of a small disc of platinum placed obliquely, from which arise the "x" rays diverging in all directions. He had overcome the difficulty of the fatigue spot, or dark area, on the surface of the tube of which so many investigators have complained, by carefully heating the tube on the flame of a spirit lamp before the current was turned on. The best cryptoscope he has found was a sheet of paper evenly stretched on a wooden frame, and coated with a mucilaginous solution of barium or potassium platino-cyanide, preferably the latter. He had used the calcium tungstate, which is less expensive, but not with so satisfactory results. Dr. Macintyre showed on the screen photographs of nearly all the bones and joints of the living body including the deeply seated hip-joint. The cancellated structure of the bones of the hand was shown in a beautiful photograph taken with an exposure of six seconds. Photographs of the internal ear showing the semi-circular canals, the mastoid cells, and the ossicules were thrown on the screen. The lecturer described a case of a boy who six months previously had swallowed a halfpenny and had ever since complained of pain in the region of the cardiac end of the stomach with some difficulty in swallowing. On looking with the cryptoscope at the situation indicated by the pain nothing abnormal was detected, but on proceeding upwards the halfpenny was found impacted in the gullet on the level of the fourth dorsal vertebra, and a well-defined photograph of this case was shown, in which the ribs, spinal column, and the halfpenny could be distinctly seen. A case illustrating the use of the fluorescent screen in differential diagnosis was mentioned. A woman into whose middle finger some time ago a needle entered complained of pain at the point of the finger and insisted that the needle was still lying there, but it could not be detected by ordinary examination. On employing the cryptoscope, however, indications of periostitis of the terminal phalanx were observed and the needle was discovered in the tissues above the level of the wrist, the patient being convinced of this only when she saw the photograph. Dr. Macintyre had taken over 300 photographs. He objected to the introduction of new terms for the photographic results of the "x" rays, believing them to be vibrations in the luminiferous ether beyond the ultra-violet rays, and therefore the chemical effects on the sensitive film must be distinctly photographic in character. He spoke of the penetration of the rays and the methods he had adopted for obtaining the best definition and showed a photograph of the inner aspect of the right side of the skull with the courses of the meningeal vessels distinctly indicated and without any blurring although the rays passed through the other half of the skull, this result being attained by determining the penetration by length of exposure, distance of the tube from the part, and focussing by means of the cryptoscope. The most important advance, however, made by the lecturer was in photographing some of the soft parts as observed in a representation of a living larynx in which the tongue, the entrance to the œsophagus, the epiglottis, the cartilages of the larynx, and the hyoid bone were perfectly defined in various degrees of density according to their structure. By means of a small cryptoscope covered with a thin sheet of aluminum Dr. Macintyre had been able to see the antrum of Highmore as well as the roots of the teeth in the upper and lower jaws, and he showed a photograph in which erosion was distinctly visible in a case of cancerous disease of the upper jaw. He demonstrated the use of his cryptoscopic screens by passing the rays through the body of a boy, and the audience could distinctly see the ribs, spinal column, shoulder girdle, &c. Dr. Macintyre uses ordinary photographic plates, but by improving the Crookes's tubes he hopes soon to produce instantaneous photographs by the "x" rays.

Note.—Dr. Macintyre telegraphs that since his return to Glasgow he has obtained a distinct image of the bones of the hand "with one flash in the tube from a single interruption of an eleven inch spark coil," thus reducing the exposure to an exceedingly minute fraction of a second.

THE MIDWIVES REGISTRATION BILL.

A WELL-ATTENDED and influential meeting of the medical profession of Sheffield and its neighbourhood was held at the Medical School on April 16th, Dr. Dyson, senior physician of the Sheffield General Infirmary, being in the chair. The meeting was called to consider the above Bill and what steps ought to be taken with regard to it. A large number of the practitioners present took part in the discussion, and, as the outcome of the meeting, the resolutions, of which the following are abstracts, were carried unanimously.

1. That no legislation should take place until the General Medical Council and other public legalised medical bodies, and also the medical profession at large, have had full time to consider and opportunity to suggest amendments. Evidence on the subject has hitherto been taken somewhat too exclusively from special societies in London and elsewhere, and a truer view of the case would be acquired by obtaining also the opinion of general practitioners and of Poor-law medical officers.
2. That every Bill for the registration of midwives hitherto brought forward has proposed to institute what would, in reality, be a new and inferior class of medical practitioners, thus interfering with the beneficial operation of the Medical Acts by the licensing, in a most important branch of practical medicine, of, in our opinion, insufficiently trained and badly qualified persons.
3. That when it is stated that midwives are to have sole charge of cases of "natural labour" only, the expression made use of is very misleading, for a labour, apparently at first quite "natural," may suddenly become complicated and dangerous, and the fact needs emphasising that the heavy mortality amongst women during childbirth is by no means chiefly due to ignorance and mismanagement, as is sometimes asserted, but largely to "natural" causes, which can only be guarded against by superior skill. Well-regulated and prolonged study is absolutely necessary for those undertaking sole charge of any labour, and the short and perfunctory preparation and examination of women seeking to become midwives, too frequently practised of late, can be no adequate guarantee of their fitness for such grave responsibilities.
4. That the portals of the medical profession are now thrown open to both sexes—therefore that, after adequate study and authorised examination, women have now exactly the same opportunity for practising midwifery as men.
5. That we are prepared to support a measure for the registration of midwifery nurses, who shall attend confinements only under the control of fully qualified medical men or women, but never be entrusted with sole charge and responsibility.

A large general committee and an executive committee were appointed to take steps to bring the foregoing resolutions to the notice of the Members of Parliament of the city and district, and to as many other Members as possible, with a view to their being persuaded to take action, and not to allow any hasty or ill-considered legislation to take place in connexion with a question of such vast importance to the public in the first place, and to the medical profession in the second.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Marylebone Sanitary District.—This district is at the present time, Mr. Wynter Blyth observes, thanks in no small degree to the outbreaks of small-pox which have occurred within its limits, as well protected by vaccination as any part of London. We are glad to hear this, and we trust that other districts will not fail to profit by the experience which Marylebone has had. Mr. Blyth, in referring to the necessity for ample cubic space in fever hospitals, observes that it is a debatable point whether it is not better to temporarily curtail such cubic space than by insisting upon a liberal allowance to necessitate the retention of many patients in crowded tenement houses. It is difficult to decide a point of this nature, and it could probably only be discussed with profit in relation to the operations of a given hospital and district. If the reduction of cubic space minimises the chances of recovery of patients already in hospital and increases their tendency to septic complications and the contraction of other infectious diseases, we should say that a grave responsibility would rest upon the medical superintendent who permitted the "overcrowding"; but, again, there is the question of reduced chances of recovery to patients left in the tenement houses to be considered. Mr. Blyth, in discussing the hospital accommodation of the metropolis, refers to the fact that for two years the Marylebone vestry established and maintained temporary hospitals for infectious disease, but as no other

local authority followed the example set by Marylebone the vestry declined to maintain another hospital. Typhoid fever showed an increase in Marylebone in 1895, and Mr. Blyth thinks it not improbable that owing to the prolonged frost some local pollution of the water-supply may here and there have occurred. There is in Marylebone a large number of workshops, and Mr. Blyth reports that it is impossible for all of them to be properly inspected with the staff at his disposal. He thinks it may be desirable to add a lady inspector to the staff as there are several places in the parish which cannot be conveniently or decently supervised by male officers. The supervision of the milk traffic in Marylebone seems of a very thorough nature, or at least so far as the present legislative interference goes. To prevent any evasion of justice lay agents have been freely used for the purchase of samples, which, by the way, are collected extensively in the streets on Sundays and holidays and at an early hour in the morning, while inspectors have, on complaint, attended at private houses and taken milk on delivery. Mr. Blyth points out that the greatest adulterators are not the residents or tradesmen of the district, but itinerant vendors who hawk milk about the poorer parts. The supervision which is exercised in Marylebone seems, however, to be driving this species of milk vendor to other districts where the officers are more lax.

Chelsea Urban District.—Dr. Louis Parkes reports that the general death-rate of this district for 1895 was 19·28 per 1000, as compared with a rate for London as a whole for the same period of 19·86. The Chelsea rate is in excess of that for 1894, and Dr. Parkes states that the excess is in large part attributable to the return of influenza and to diarrhœal diseases. The most noticeable feature in the sanitary history of Chelsea during 1895 was the prevalence of scarlet fever, the figures for this disease showing an excess of 30 per cent. over those for London as a whole. There were in all 623 cases notified, and of these 57 occurred in the Duke of York Royal Military School and 41 in the Chelsea Workhouse and Infirmary. Dr. Parkes alludes to the difficulty which arose in the removal of cases consequent upon the demand upon the accommodation of the Asylums Board, and he states that some secondary cases arose where there was delay in removing the initial cases or when removal did not take place; but he observes that the exceptional incidence of scarlet fever in Chelsea is not to be explained by this inability of the Asylums Board, inasmuch as other districts suffering under a similar disadvantage exhibited no such excess. Dr. Parkes makes an interesting comparison of the vital statistics of the Chelsea home district with the detached portion of Kensal-town, and he shows that in regard at least to the five years 1891 95 the average standard of public health in Kensal-town was superior to that of the home district. Both its general and zymotic death-rate are lower. During 1895 there was an increase of 10 per cent. in the number of houses on the constant water service, but, as Dr. Parkes remarks, the whole of the home district should be receiving a constant supply.

Thingoe Rural District.—Dr. C. S. Kilner reports that during the year 1895 he found two boys who were engaged in milking cows desquamating freely from scarlet fever, their parents being ignorant of the nature of the disease from which they had been suffering. It would have been interesting could the distribution of the milk drawn by these boys have been traced, as presumably they must have been engaged in milking on repeated occasions while undergoing desquamation. If the milk-supply from this source was a large one the evidence would have been of value, even if only from a negative standpoint. In reference to the subject of disinfection under the provision of the Infectious Diseases (Prevention) Act, 1890, Dr. Kilner states that for the future he will not consider a house to have been disinfected to his satisfaction unless the process has been carried out by a competent person such as the inspector of nuisances.

Westminster Sanitary District.—Dr. J. Norton supplies in his report a good example of the difficulties which are experienced in practice with respect to infectious diseases as conveyed by tramps. He states that in a case of small-pox which occurred in a common lodging-house in his district the patient had slept in no less than five different places since he had noticed the rash on his body; and in another instance the patient, after the rash was observed, ran away and was only captured with difficulty. Owing to some alleged overcrowding in one of the Peabody Buildings investigations were made into the matter, and although the allegation was apparently unfounded, inquiries in respect to some Salvation Army shelters in the same district led to the discovery of considerable overcrowding and defective ventilation. Dr. Norton bears testimony to the good spirit with which his suggestions were received and to the prompt manner in which they were carried out by authorities.

Whitechapel Sanitary District.—Mr. Joseph Loane refers to the difficulty of arriving at anything like an accurate estimate of the population of his district, owing to the disturbing influences of immigration, &c., which obtain in it. He, however, roughly estimates the population at 79,000. The birth-rate of the district for 1895 was 39·3 per 1000, as against a metropolitan rate of 30·4 per 1000. The general death-rate was for the same period 22·8, as against 19·7 for the metropolis. The infantile mortality was 154 per 1000 registered births, as against 165 for London. Referring to the delay which was experienced in July and in September in procuring the admission of patients into the hospitals of the Asylums Board, Mr. Loane observes that in 35 cases 3 applications were made, and in 25 cases 4, while in 1 case as many as 11 are recorded. At the same time, Mr. Loane wishes to emphasise the fact that the officers of the Board showed as far as possible every consideration for the necessities of the district. He suggests that an increased accommodation for convalescents would render the existing beds more frequently available for acute cases. In reporting upon the outbreak of small-pox which occurred in Whitechapel during the year under review Mr. Loane states that 50 per cent. of the cases were reported to have come from the Salvation Army shelters, 25 per cent. from private houses, and the remainder from registered common lodging-houses, the Whitechapel Infirmary, and outside philanthropic shelters. Mr. Loane, in referring to the registered common lodging-houses, draws attention to the very thorough manner in which their inspection is carried out by the London County Council. Whitechapel contains a large number of philanthropic shelters, there being four belonging to the Salvation Army and eight to other bodies. The common lodging-houses are registered to accommodate 5612 persons and the model dwellings in the district have a population of 13,778. Mr. Loane proposes to discuss in a subsequent report the public health aspects of these model dwellings.

Coventry Urban Sanitary District.—Considerable improvements in matters calculated to affect the public health took place in Coventry during 1895. A second source of water-supply was provided, electric light was installed, and the tramway system, which, as Dr. Mark Fenton observes, will tend to distribute the population over a wider area, was extended. There has been during recent years in Coventry a steady decrease in lung diseases other than phthisis, and Dr. Fenton considers the diminution in all probability due to an alteration in the character of the population rather than to meteorological influences. He observed that the operatives in the cycle industry, who have largely supplanted the weavers and watchmakers, are not employed under such untoward conditions as were the latter. Attention is drawn in the report before us to the dangerous practice of sending school children to inquire as to the absentees. Dr. Fenton states that he has known infectious disease to be contracted in this manner, and the practice, he adds, continues in spite of his having warned the managers of its dangers. The condition of urban populations as to vaccination is at the present time a matter of interest, and the figures embodied in Dr. Fenton's report are worth recording. In 1889 no less than 96 per cent. of the infantile population were vaccinated, but since that year the following percentages represent for each year the state of affairs—89, 39, 7·6, 7·2, 7·7, and 4·5. The Coventry guardians are at the present time, in common with not a few other Poor-law authorities, as Dr. Fenton remarks, awaiting the report of the Royal Commission, and a grave responsibility rests upon the members to complete their labours. It is, however, some consolation to learn from the Coventry report that Dr. Fenton has advised the erection of a separate small-pox hospital.

Surbiton Urban District.—In discussing the prevalence of diphtheria in Surbiton during 1895 Dr. Owen Coleman states that sanction was given him to arrange for a supply of antitoxin to all who might apply for it and also to provide bacteriological examination in cases where this was necessary in order to assist the diagnosis. Dr. Coleman supplies a table in his report showing that the fatality-rate of diphtheria in his district has during the last six years varied from 6·2 per cent. to as much as 47·6, facts which it will be well to hold in view in inferring the effect of any actual or

supposed remedies. In the matter of scarlet fever Dr Coleman gives some interesting instances of undetected and consequently unnotified cases of that disease which tend to show the limitations which with lay diagnosis must perforce obtain in practice to the advantage of compulsory notification. It would seem that the only means of reducing these cases is by educating the public as to the necessity of seeking medical advice and by instituting periodical examination of school children. Referring to the severe frost of February and March, 1895, Dr. Coleman draws attention to the fact that although in his district the absence of water led to numerous olfactory nuisances there was no excessive amount of illness due to this cause; there was not any increase of enteric fever during the period of frost. As Dr. Coleman observes, this absence from illness may possibly have been due to the fact that the excessive cold killed or at least arrested the activity of both putrefactive and pathogenic organisms.

Stoke-upon-Trent Urban Sanitary District.—Dr. Samuel Johnson records with satisfaction the fact that many important measures have been adopted for the protection of the potters. Overalls are now used by all workers in dust and glaze, and mess-rooms have been provided for those employed in the lead department, who are also compelled to wash before taking food. The use of respirators is still optional, but they are provided gratuitously.

Haydock Urban Sanitary District.—Dr. T. E. Hayward has estimated the population of his district by the three methods which may be employed for this calculation and the results are of interest. By the method adopted by the Registrar-General he estimates the population at 6343; by calculating the number of inhabited houses and the average number of inhabitants per house the figures 7791 are obtained; while estimating it upon the birth-rate the population is found to be 7884. It will be observed that the last two methods yielded nearly identical results, and Dr. Hayward has taken 7800 as the population. In reference to puerperal fever Dr. Hayward supplies figures to show that during the ten years 1885–94 the mortality-rate among women in childbirth in Haydock has been twice as great as for England and Wales. The township of Haydock is supplied with water direct from the Rivington reservoir of the Liverpool Corporation, but in the event of a breakdown in the main there are two storage reservoirs for supplying Haydock in the interval. Dr. Hayward states that as one of these reservoirs is uncovered and the ground in its neighbourhood is manured with privy midden contents pollution of the water in the reservoir is not altogether unlikely to occur. It seems, too, that the water during storage tends to deteriorate, and Dr. Hayward advises that when the direct supply from Rivington is cut off and it is necessary to use the water from the reservoir in question it should be boiled before use.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 7092 births and 3952 deaths were registered during the week ending April 18th. The annual rate of mortality in these towns, which had been 18·3 and 20·0 per 1000 in the two preceding weeks, declined again last week to 19·0. In London the rate was 19·4 per 1000, while it averaged 18·7 in the thirty-two provincial towns. The lowest rates in these towns were 11·1 in Swansea, 12·1 in Brighton, 12·8 in Croydon and in Preston, and 14·6 in Portsmouth; the highest rates were 21·2 in Bolton, 21·5 in Salford, 21·9 in Sunderland, 22·0 in Liverpool, and 25·2 in Birmingham. The 3952 deaths included 635 which were referred to the principal zymotic diseases, against 615 and 666 in the two preceding weeks; of these, 252 resulted from measles, 206 from whooping-cough, 66 from diphtheria, 48 from diarrhœa, 35 from scarlet fever, 27 from "fever" (principally enteric), and 1 from small-pox. The lowest death-rates from these diseases were recorded in Brighton, Swansea, Preston, and Huddersfield, and the highest rates in Bolton, London, Salford, Birmingham, and Birkenhead. The greatest mortality from measles occurred in London, Plymouth, Norwich, Oldham, Sunderland, and Birkenhead; from whooping-cough in Bradford, Cardiff, London, Birmingham, and Derby; and from "fever" in Wolverhampton and Salford. The mortality from scarlet fever showed no marked excess in any of the large towns. The 66 deaths from diphtheria included 42 in London, 8 in Birmingham, 4 in West Ham, and 3 in Manchester. One fatal case of small-pox was registered in Leeds, but not one in London or in any other of the thirty-three large towns. There were 16 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 18th inst., against 33, 23, and 21 at the end of the three preceding weeks; 4 new cases were admitted during the week, against 2 and 5 in the two preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2527, against 2744, 2676, and 2587 on the three preceding Saturdays; 201 new cases were admitted during the week, against 224, 186, and 226 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 270 and 301 in the two preceding weeks, further rose to 328 last week, but were 56 below the corrected average. The causes of 58, or 1·5 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Cardiff, Oldham, Newcastle-upon-Tyne, and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Norwich, Liverpool, Sheffield and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·7 and 19·7 per 1000 in the two preceding weeks, declined again to 19·0 during the week ending April 18th, and corresponded with the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 11·2 in Leith and 11·8 in Greenock to 22·6 in Aberdeen and 24·3 in Paisley. The 554 deaths in these towns included 21 which were referred to whooping-cough, 11 to diarrhœa, 9 to measles, 7 to scarlet fever, 7 to "fever," and 1 to diphtheria. In all, 56 deaths resulted from these principal zymotic diseases, against 61 and 91 in the two preceding weeks. These 56 deaths were equal to an annual rate of 1·9 per 1000, which was 1·1 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 21 and 29 in the two preceding weeks, declined again to 21 last week, of which 10 occurred in Glasgow and 5 in Aberdeen. The deaths referred to measles, which had increased from 6 to 20 in the three preceding weeks, declined to 9 last week, of which 7 occurred in Glasgow and 2 in Dundee. The 7 fatal cases of scarlet fever showed a further slight increase upon the numbers recorded in recent weeks, and included 2 in Glasgow, 2 in Edinburgh, and 2 in Aberdeen. The deaths referred to different forms of "fever," which had been 4, 6, and 12 in the three preceding weeks, declined to 7 last week, of which 3 occurred in Glasgow and 3 in Edinburgh. The deaths from diseases of the respiratory organs in these towns, which had been 87 and 110 in the two preceding weeks, were 109 last week, and were 23 below the number in the corresponding period of last year. The causes of 34, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·5 and 25·4 per 1000 in the two preceding weeks, further declined to 20·6 during the week ending April 18th. During the past three weeks of the current quarter the death-rate in the city has averaged 23·8 per 1000, the rate during the same period being 19·2 in London and 16·6 in Edinburgh. The 138 deaths registered in Dublin during the week under notice showed a decline of 32 from the number in the preceding week, and included 6 which were referred to the principal zymotic diseases, against 8 and 10 in the two preceding weeks; of these, 4 resulted from scarlet fever, 1 from whooping-cough, 1 from "fever," and not one either from small-pox, measles, diphtheria, or diarrhœa. These 6 deaths were equal to an annual rate of 0·9 per 1000, the rate during the same period being 4·0 in London and 1·5 in Edinburgh. The fatal cases of scarlet fever, which had been 2 in each of the three preceding weeks, rose to

4 last week. The mortality from whooping-cough and from "fever" corresponded with that recorded in the preceding week. The 138 deaths in Dublin last week included 17 of infants under one year of age, and 42 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a slight further decline from the numbers returned in recent weeks. Six inquest cases and 7 deaths from violence were registered; and 48, or more than a third, of the deaths occurred in public institutions. The causes of 5, or nearly 4 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-MAJOR KAVANAGH has been posted to the North-Western District. Surgeon-Major Fayle has been transferred from Canterbury to Shorncliffe and Surgeon-Major Harran to Tipperary. Surgeon-Major Braddell and Surgeon-Captain Harris have arrived in Egypt. Surgeon-Captains Josling and Hosie have embarked for the West Coast of Africa and Surgeon-Captain Lavie for Egypt. Surgeon-Captain Browning has been posted to Limerick.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain W. E. Jennings is appointed to act as Health Officer of the Port of Bombay pending the return of Surgeon-Major F. F. MacCartie. Surgeon-Major J. Crimmin, V.C., is appointed to act as Port Surgeon, Aden, vice Surgeon-Major W. P. Carson, proceeding on leave. Surgeon-Captain G. C. Hall (Madras) has been transferred by the Secretary of State for India to temporary half-pay subject to Her Majesty's approval.

NAVAL MEDICAL SERVICE.

The following appointments are notified: — Surgeons: E. E. Kershaw to Malta Hospital and R. H. Way to the *Howe*.

MILITIA MEDICAL STAFF CORPS.

Surgeon-Major Thomas William Richardson, late Norwich Company Volunteer Medical Staff Corps, to be Surgeon-Captain.

VOLUNTEER CORPS.

Rifle: 2nd Volunteer Battalion the Cameronians (Scottish Rifles): James Livingstone Loudon, M.B., to be Surgeon-Lieutenant. 2nd Volunteer Battalion the South Staffordshire Regiment: Surgeon-Lieutenant-Colonel J. Clark, M.D., resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement.

THE MATABELE RISING.

The news from the Cape as to the extent of the Matabele rebellion and the perilous position of Bulawayo, the centre of the Chartered Company's possessions, is serious; and, looking to the nature and dimensions of the crisis, a determined effort will have to be made by the authorities in South Africa and in this country if peace and order are to be re-established in that territory. General Sir Frederick Carrington, who has had long experience of African warfare, has been appointed by the Home Government to command the forces in Matabeleland. There has already been a good deal of fighting, and the whole country around is in the hands of the Matabeles; Bulawayo is garrisoned by a small force, is badly provisioned, and not too well supplied with ammunition. There is plenty of excellent material in South Africa, accustomed to savage warfare, out of which a strong local force could be organised, but reinforcements of regular troops will, no doubt, have to be despatched from this country to take part in quelling the rebellion. Orders have been already sent to Aldershot to hold some troops in readiness for embarkation to South Africa, and there is much activity at Woolwich Arsenal in the preparation of supplies of warlike stores and ammunition. The *Spectator* makes a suggestion to philanthropists in regard to the supply of medical aid and material. Our contemporary recommends that half a-dozen picked surgeons should be sent to Bulawayo with antiseptic appliances, and implies that there is a deficiency in this respect, adding that if Bulawayo is really besieged half the wounded may die of infective wound diseases. We do not, of course, know whether our contemporary speaks from any special knowledge of the facts out there, and can only trust that the supply of surgeons with surgical and antiseptic material is ample, as should certainly be the case, to meet the indispensable requirements of modern surgery.

THE ARMY MEDICAL STAFF.

A correspondent who writes most temperately on the present unsatisfactory conditions under which the officers of the Army Medical Staff are now serving, and who draws our attention to the current rumour with regard to the revival of the regimental system and the abolition or reorganisation of the Army Medical Staff, suggests that the following lines should be followed by the authorities when the question again comes to a head. They are, he says, the expression of the feeling of a large body of the best medical officers now serving in Her Majesty's Army. The suggestions are as follows: 1. The establishment of a royal corps of surgeons to be called the corps of "Royal Surgeons" and to be recognised by the letters "R.S." after the titles of the different ranks. The corps to consist of the officers of the Army Medical Staff and the non-commissioned officers and men of the Medical Staff Corps. 2. The amalgamation of the Army Medical Staff and the military division of the Indian Medical Service. 3. If thought necessary the attaching of young officers of the Royal Surgeons to regiments for definite periods. Our correspondent reminds us that the Royal Engineers were years ago in much the same unhappy state as the officers of the Army Medical Staff are at present, and that the honourable position now accorded to the officers of the former service is chiefly owing to the formation of their Royal Corps.

THE NILE CAMPAIGN.

There is but little to chronicle this week in regard to the progress of the Nile Expedition and the late attack at Suakin. It appears that some friendly Arab tribes have recently made a demonstration on the Nile beyond Dongola in the Monasir district, and that this, combined with the defeat of Osman Digna in the Suakin district, has somewhat disconcerted the Dervish leaders. The Dervishes are stated to patrol the neighbourhood of Akasheh every night, and it is alleged that Osman Digna is at Harasab, and that he is receiving large reinforcements, but that the adequate provisioning of his army is a source of difficulty. Great activity still prevails in the transport department of the expedition at Wady Halfa and elsewhere, and in planning and arranging the hospitals and transport for the sick and wounded. Bearer companies will be stationed at Sarras, Ambigole, and Akasheh. It is understood that a considerable force from this country will, later in the season, proceed to Egypt to take part in the Anglo-Egyptain campaign up the Nile. It is currently reported in Cairo that Sir Redvers Buller will arrive there in August in connection with the Dongola expedition.

THE GOVERNMENT OF INDIA AND THE HEALTH OF THE TROOPS.

A severe epidemic of enteric fever is reported to have broken out in the Norfolk Regiment stationed at Allahabad. Since March 1st 20 deaths have occurred out of 47 cases. The *Times* says:—"An important step is about to be undertaken by the Government of India with the view of reducing the amount of sickness from cholera, enteric fever, &c. A special sanitary officer of proved bacteriological knowledge is being appointed to each large cantonment. These officers will be charged with the care of the general health of the troops, so far as it is possible to secure this by careful sanitary precautions. Their duties will include the conducting of full inquiry into the causes of outbreak of all epidemic diseases."

THE RUSSIAN RED CROSS EXPEDITION.

The Red Cross expedition to Abyssinia is under the command of General Shoedoff, and comprises some thirty medical men and nurses, with fifty assistants. Some difficulty has arisen, as we have already intimated, with the Italian Government in connexion with this mission to the Abyssinian forces, and it is understood that the expedition will not be allowed to proceed *viâ* Massowah. From whatever cause this has arisen—and we can only suppose that it has occurred from some doubts being entertained on the part of the Italians as to the purely philanthropic nature of the expedition—it is, on the score of humanity, to be regretted.

HEALTH OF CALCUTTA.

Dr. W. J. Simpson in his report on the health of Calcutta for December, 1895, states that there were 80 deaths from

cholera against 144 in the previous month. The figure is lower than all of the corresponding figures of the past ten years, excepting 1892, 1893, and 1894, and is lower than the average of the decade by 41.

BUBONIC PLAGUE AT HONG-KONG.

The outbreak of plague in this colony still continues. Mr. Chamberlain has received telegraphic intelligence from the Governor of Hong-Kong that sixty-four further cases occurred in the week ending the 21st instant.

Surgeon-Major-General William R. Rice, M.D., C.S.I., Bengal Retired List, has been made Honorary Physician to the Queen, vice Inspector-General Sir W. MacKenzie, K.C.B., C.S.I., Retired List, deceased.

The post of Professional Assistant at Headquarters, which will become vacant on the appointment of Surgeon-Major-General Jameson to the office of Director-General, has been conferred upon Surgeon-Major-General W. Taylor.

Correspondence.

"Audi alteram partem."

THE REGISTRATION OF MIDWIVES.

To the Editors of THE LANCET.

SIRS,—The writer of the very interesting and able article on Midwives Bills in THE LANCET of April 18th has fallen into one very curious error, to which, I am sure, he will forgive me for calling attention. He says: "The General Medical Council suggested the substitution of the title of 'Midwifery Nurse' for that of 'Midwife.'" By a reference to your report of its proceedings[1] it will be seen that, so far from this being the case, the General Medical Council, after fully considering the suggestion to that effect, rejected it. The error, no doubt, arose from the circumstance that the title of the Bill as sent up by the General Medical Council to the Privy Council contained the words "midwifery nurse," although by special resolution it had been decided not to recommend the introduction of these words into the clauses of the Bill itself.

In respect to the suggestions of the General Medical Council having been ignored in the present Bill the writer says that their omission throws on its promotors a great responsibility. So it would if the omission were the act of the promoters, but it is not. It was the Privy Council that rejected these suggestions. The rejection embraced the entire series with one single exception, and that exception was made at the instance of the promoters. The alterations made in the Bill during its progress in the House of Lords were all made by the Privy Council. In one or two instances the alterations were undoubted improvements, but the majority of the alterations were, in the opinion of the promoters, the very reverse of improvements. As an example may be mentioned the omission of the clauses that provided for the efficient control of the practice of midwives. The promoters are quite prepared to support the reinstatement of these clauses. With regard to the suggestions of the General Medical Council your article specifies one or two that, in the opinion of the writer, ought to have been adopted, particularly the suggestion that before existing midwives be allowed to register evidence should be produced as to their character and capacity. It must not be forgotten that on this very question of requiring evidence of moral character a former measure was wrecked. The Bill was "talked out" by the late Mr. Bradlaugh, on the ground that it was monstrous to demand evidence of moral character in the case of midwives seeking to be registered when it was not demanded under similar circumstances in the case of medical practitioners. The promoters of the Bill have, indeed, encountered great difficulties in connexion with this part of the question. They consider it very reasonable to ask that existing midwives should be required to produce evidence of being respectable and competent before being admitted to the Register. But they are told that they must be satisfied with the fact that registration can be refused to any woman who has been shown to be guilty of acts which, if they had been proved against her after being placed on the Register, would have afforded sufficient grounds for her removal from it. The Dentists' Register and other registers are, much against the will of their promoters, burdened with the names of undesirable and incompetent persons. It was found impracticable to avoid it then, just as it is now. To most of the points which the writer of the article mentions as desirable the promoters of the present Bill have not the slightest objection.

Will you allow me, as one possessing some claim to a special acquaintance with the subject, to make a few observations on the other Bills you mention? The adoption of the term "midwifery nurse" has been stated by Sir Walter Foster, M.P.,[2] to be the preliminary to placing the midwife under the direct superintendence of a medical practitioner, and the term was avowedly coined with this intention. Both the Bill drafted by the Parliamentary Bills Committee of the British Medical Association and that drafted by the Lancashire and Cheshire branch of the same association adopt the term "midwifery nurse," presumably with the object above mentioned. Now, in the report which prefaces the latter there is the following remarkable statement: "Your committee have fully considered the question of the attendance on cases of midwifery by persons other than registered medical practitioners, and are unanimously of opinion that the proposition that it be made compulsory for every woman to have a registered medical practitioner in attendance at confinemant, or that no person other than a registered medical practitioner, or a person acting under the direct or personal supervision of such, be allowed to attend any case of midwifery is, however desirable, impracticable." The object for which the term was coined is, therefore, stated by its originators to be unobtainable. Further, it has been overlooked by the promoters of these two Bills that if the term "nurse" be applied legally to a class of women who attend cases on their own account it at once establishes a "nurse" as a person who may be in attendance without a medical man—namely, as, in a very real sense, a "new class of practitioner." The promoters of these two Bills distinctly state that they do not expect every case of confinement attended by a "midwifery nurse" to be attended by a medical man too. They acknowledge that the "midwifery nurse" must act without the direct supervision of a medical practitioner—that is, as a midwife—yet without any solid reason they want to exchange for the well-known and well-understood term of "midwife" a term which no one knows and which does not mean what its constituent words would seem to imply.

Sir Walter Foster, M.P., states that he would have no objection to the Bill now before the House of Commons if the change of term were made. He agrees with the promoters of the Bill that the present state of affairs in regard to attendance in childbirth amongst the poorer classes is scandalous and cannot be allowed to continue. Yet he, with others, insists upon an alteration which, if adopted, would be useless in regard to the attainment of its avowed object, and which is interpreted outside the profession as the expression of a desire on the part of the medical profession to have all the midwifery of the country in its own hands. I have had ample opportunity of studying the attitude of the non-medical public towards this question, and I can testify that there is a steadily increasing impression abroad that the medical profession, in these various Bills for the registration of midwifery nurses, is trying to get into its own hands that large proportion of the midwifery practice of the country (amounting to some half-million of cases per annum) now in the hands of the midwives. It is absolutely necessary that the public should be disabused of this erroneous idea, or it will, I am assured, bear very disagreeable fruit in the not far distant future, when it will take the shape of opposition to medical interests in any future sanitary or other Bill affecting medical practice or in the promotion of our interests. The only way in which this impression can be effectually removed is by united action in the profession itself in support of the general principal of legislation. Let us agree to let the present Bill pass its second reading, reserving our differences for adjustment in the committee stage. Medical interests will be much more likely to receive proper consideration. Do not let us cut our own throats by stickling for meaningless alterations of title, or, still worse, for the insertion of clauses that, however desirable from a

[1] THE LANCET, June 8th, 1895, p. 1474.

[2] THE LANCET, June 8th, 1895, p. 1474.

medical point of view, can be shown to threaten an interference with that very liberty of the subject which it is one of the main functions of the House of Commons to protect.—Apologising for the length of my communication,

I am, Sirs, yours faithfully,

ROWLAND HUMPHREYS, L.R.C.P. Lond., &c.

Fellows-road, N.W., April 13th, 1896.

GASTRO-ENTEROSTOMY: TWO INTERESTING CASES.

To the Editors of THE LANCET.

SIRS,—In THE LANCET for Jan. 20th, 1894, at p. 143, is reported a case of gastro-enterostomy which occurred in the Peterborough Infirmary. The writer of the introductory remarks, alluding to the risk of contraction of the opening after this operation, says: "What the result of suturing the edges of the opening in the manner adopted by Dr. Walker may prove remains to be seen. It is important that the result should be recorded." I now give the result. The patient was operated upon on May 18th, 1893; she died on May 20th, 1895; in the interval she looked after her family and assisted to maintain them by going out washing, &c.; she remained perfectly free from symptoms of obstruction to the passage of food from the stomach, dying from the effects of secondary growths which formed in the lower part of the abdomen and elsewhere. I adopted the same method in a case in which I operated on Sept. 3rd, 1894. The patient made an excellent recovery, dying on Oct. 30th, 1895, with secondary deposits in the liver and elsewhere, having been free from sickness and able to eat solid food without discomfort from the time of the operation. Post mortem the artificial opening between the bowel and the stomach was found quite patulous, admitting my forefinger up to the second joint. The specimen is now in the Pathological Museum of Cambridge. The perfect result in these two cases must, I think, be partly, at least, due to the method of suturing the margins of the openings before approximating them, described in the report of the first case in your columns. I am, Sirs, yours obediently,

THOMAS JAMES WALKER.

Westgate, Peterborough, April 21st, 1896.

*** We are indebted to Dr. Walker for this important addition to the notes of the case which was published in the Mirror of Hospital Practice. Our records are much increased in value by such contributions. That they are required is proved by the hesitancy which some physicians still have in recommending this operation at the right stage even in suitable cases. We congratulate Dr. Walker on the success of his operations. The method of suturing in these cases was as follows. The peritoneal and mucous edges of the opening in the stomach were stitched together with the idea of preventing contraction. The jejunum was opened and the edges were treated in the same way. Senn's plates were introduced, but before drawing the silk tight the peritoneum of the stomach and that of the jejunum near the posterior edges of the plates were united with silk, thus forming a semicircle of stitches guarding the opening posteriorly; the plates were then drawn tightly together, and an anterior semicircle of stitches was then inserted, thus completing the circle of guarding stitches.—ED. L.

"THE EFFECT OF MUSCULAR WORK UPON THE ALKALINITY OF THE BLOOD."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of April 11th Mr. W. B. Fotheringham has pointed out a contradiction which exists between the views of Dr. Haig on the above subject and those which were expressed by myself in an article published in THE LANCET of March 7th of this year. Mr. Fotheringham rightly insists that the credibility of Dr. Haig's theory of the cause of fatigue stands or falls with the correctness of his view as to the effect of muscular work upon the alkalinity of the blood. According to Dr. Haig the effect of such work is to increase the alkalinity of the blood. In my article the diametrically opposite statement was made. The evidence for the truth of that statement I did not give in detail, but as Mr. Fotheringham has raised the question as to what is really the effect of muscular work upon the alkalinity of the blood it is only right that I should furnish some proofs of the correctness of my statement. The subject has been investigated by Geppert and Zuntz[1] in rabbits. They found a reduction of alkalinity in the proportion of 106 to 248, or to more than one half the normal. Drouin, in the thesis to which I referred, obtained a similar result in rabbits. Peiper,[2] employing the titration method, confirmed these observations in the case of the human subject, the reduction he found being in the proportion of 182 to 218. The most recent and complete investigation of the subject, however, will be found in the article of Cohnstein.[3] He has clearly shown that the effect of muscular work is always to reduce the alkalinity of the blood. In vegetable feeders, for reasons which I have not space to discuss here, this reduction is more marked and lasts longer than in animal feeders, but even in the latter it can always be observed. I further stated that lactic acid was probably responsible for the reduced alkalinity. The evidence for this statement is that lactic acid is always found to be increased in amount in the blood after muscular exercise. Experimental proof of this will be found in the papers of Spiro[4] and of Werther.[5] In the light of the above evidence I think Mr. Fotheringham will agree that I was fully warranted in my assertion that the effect of muscular work is to reduce the alkalinity of the blood. I had at one time intended to refer to the relationship of some facts in the chemistry of the blood to the theories advanced by Dr. Haig, but I refrained from doing so in order to avoid controversy. I would only point out here with reference to the point under discussion: (1) that normal sweat is not acid and therefore cannot be regarded as a channel by which acid in the blood is eliminated; and (2) that it is possible that the immediate fall in the excretion of urea which Dr. Haig has shown to follow exercise is to be explained, in part at least, by the elimination of some of the nitrogen which should appear as urea in the form of compounds of ammonia, these ammonia compounds being required to neutralise the acids produced by the excessive muscular metabolism.

In conclusion, I would only say that no one is more sensible than myself of the value and importance of Dr. Haig's contributions to our knowledge of the physiology and pathology of uric acid, but at the same time I cannot help thinking that he is in error in regarding muscular work as tending to produce an increase in the alkalinity of the blood.

I am, Sirs, yours faithfully,

ROBT. HUTCHISON, M.B. Edin.

Physiological Laboratory, University of Edinburgh, April 14th, 1896.

THE BRONCHITIS KETTLE.

To the Editors of THE LANCET.

SIRS,—It is akin to presumption to adventure a word of criticism on Dr de Havilland Hall's remarks respecting our old and tried friend, "the kettle," in THE LANCET of April 18th, but surely it is impossible to "practically banish" it from the sick room. The whole of my experience is in its favour in those urgent laryngeal and bronchial cases of very young children, not to speak of the more grave respiratory affections of children of a larger growth, including the dread pneumonias of heads of families, where we are often at our wit's end with a temperature of 103° F. or more, respirations 62, and pulse 120 per minute. On such occasions my advice would be, Exclude the fresh (cold) air and saturate the air of the sick room as speedily as possible and keep it so. "Dry bronchitis" and pneumonias so frequently occur in dry, cold weather as to make the rest exceptional, and to exclude the kettle or its equivalent would be disastrous to the patient. Even chronic catarrhal conditions are frequently benefited by the inhalation of medicated vapour. As to poultices, I have no objection to the exhibition in such cases of an occasional turpentine stupe and a jacket of wadding or other heat retainer, but frequent and good feeding are essential if we are to maintain the patient's strength in the

[1] Geppert and Zuntz: Über die Regulation der Athmung. Pflüger's Archiv, Band xlii., p. 233, 1889.

[2] Peiper. Virchow's Archiv, Band cxvi., p. 337, 1889.

[3] Cohnstein: Über die Aenderung der Blutalkalescenz durch Muskelarbeit. Virchow's Archiv, Band cxxx., p. 332, 1892.

[4] Spiro: Zur Physiologie der Milchsäure. Zeitschrift für Physiologische Chemie Band i., 1878.

[5] Werther: Pflüger's Archiv, xlvi., 63, 1890.

presence of the increased tissue change accompanying the high fever and hurried respiration.

I am, Sirs, yours faithfully,

April 20th, 1896. ALEX. MCCOOK WEIR, M.D. R.U.I., &c.

To the Editors of THE LANCET.

SIRS,—I have read with much interest Dr. de Havilland Hall's instructive and highly practical article on the Bronchitis Kettle, Poultices, and Over-feeding in Acute Lung Affections, published in THE LANCET of April 18th. Writing on the question of poultices in the pneumonia of infants and young children Dr. Hall says "that the drawbacks inseparable from the use of poultices are not compensated for by the amount of benefit that can reasonably be expected to result from them," condemning especially the heavy linseed poultice. I have frequently seen that old-fashioned and simple contrivance, the hot bran bag, secure all the advantages of a poultice in such cases of pneumonia as alluded to without any of its disadvantages. It retains the heat for many hours if previously heated in the oven, and, being light, imposes no heavy weight upon the little patient's chest. Those of us in general practice have occasionally to respect the time-honoured beliefs of many of our patients, these beliefs in some cases—I do not say in this—having little foundation in fact; and to many of these patients who do not live "in mansions of the blest" the thought of "inflammation of the lungs" brings the thought of the application of heat to the chest inevitably in its train. To ignore this routine treatment in favour of a cotton-wool jacket involves no loss of prestige to "the doctor" if a successful issue result, but if the contrary be the case I imagine he would think it had been at least advisable to combine a line of treatment from which undoubted benefit accrues with a respect for the popular prejudice. Apologising for trespassing at such length,

I am, Sirs, faithfully yours,

C. HAROLD DYER, M.B., C.M. Aberd.

Clarendon-villa, Cleckheaton, Yorks, April 20th, 1896.

"THE NEW INFANTRY SWORD EXERCISE."

To the Editors of THE LANCET.

SIRS,—To an old swordsman cognisant of the fact that the questions at issue between the French and Italian schools have again and again been thrashed out to the *n*th term, THE LANCET of March 28th supplies some curious reading on the subject. Certainly no swordsman educated in the schools of Western Europe would dream of placing himself extended on the lunge in the hopelessly dangerous position depicted by your correspondent. In case of an unsuccessful lunge, if a parry of the ensuing riposte were deceived by a disengagement, anyone in the Italian position would be straight on his adversary's point without the slightest chance of recovery. Mr. Dent well points out that the Italian extension only has to be a little further exaggerated to bring the whole thing to a *reductio ad absurdum*. I know not why this over-extension should be dignified with the title of "Italian method," for in any school, if the fencer be foolish enough to so choose, he may thrust his head forward and over-extend himself. But expert fencers are prepared for this sort of thing and know how to deal with it. In actual warfare—i.e., on rough ground—the probability is that a combatant over-extended on the Italian method would lose his balance and fall over either to one side or the other. As to any previous straightening of the arm on the lunge, however much it may be needful to warn beginners to straighten the arm previously to extension in order to avoid the fatal habit of lunging with bent arm—and to such merely initial practice I presume Mr. Dent alludes—in advanced practice the extension of the arm and advance of the body and lower extremity merge into one combined movement. I can imagine the grim smile that would illumine the countenance of Roman Schweizer—if he were still living—or that of any other great swordsman of the last forty years as he exclaimed, in reference to this wonderful extension: "That is just the position in which I should like to see my adversary so as to knock his head all to little pieces." When the members of the British army have perfected themselves in the Italian practice, by all means let them send another invitation to "Point du Jour," and ascertain whether they can lower the magnificent record of the French fencers exhibited on the occasion of their last visit to Islington.

I am, Sirs, yours very truly,

April 20th, 1896. GEORGE BARRACLOUGH, M.R.C.S. Eng.

"THE QUESTION OF MEDICAL DEFENCE."

To the Editors of THE LANCET.

SIRS,—Your correspondent, Dr. L. Drage, advocates the absorption of the Medical Defence Union by the British Medical Association solely on the ground of economy. If the Medical Defence Union were living up to or exceeding their receipts this might be a reasonable plea, but when the financial statement contained in the annual report shows there was a balance left for the year of £316, which, added to the balance of £325 remaining from the previous year, makes a total of £641 in hand, this cry for economy is manifestly a false one. The main object of his letter is to endeavour to make the British Medical Association a gigantic trades-union for the medical profession by compelling every medical man to join the Association, and then will come the tyranny of the few over the many. I admit there may be occasions when medical men ought to join together and stand firm for their just rights, as they are doing at Cork, Lincoln, Portsmouth, and other places, but they know well what they are fighting for and are continually in counsel together. But to propose that the whole medical profession are to be ruled by the clique that forms the Council of the British Medical Association is most objectionable. The Medical Defence Union is doing its work well and to the satisfaction of the members. As I said at the annual meeting, why not leave well alone? The president, secretaries, and the solicitors seem to thoroughly understand the special work required of them, and surely a subscription of 10*s.* a year is little enough to pay to insure yourself from false charges and the worries of a lawsuit. Mr. Felce stated that the name of the Medical Defence Union was sufficient to stay an action very often, and, if so, why alter it? I heartily thank you, Sirs, for the able articles in which you have opposed the absorption of the Medical Defence Union into the British Medical Association, and I believe this is the general opinion of the members. Let the last annual report of the Medical Defence Union be well circulated among all members of the profession and many more will be glad to join such a successful union.

I am, Sirs, yours faithfully,

Highbury, April 20th, 1896. GEORGE T. KEELE.

MICROSCOPICAL EXAMINATION OF PLACENTAL TISSUE.

To the Editors of THE LANCET.

SIRS,—I remember a case which impressed me somewhat at the time it occurred and which may interest some of the readers of THE LANCET.

When I was attending the lectures on midwifery at St. George's Hospital my father directed me to ask the curator of the museum to examine the substance which passed from the bowels in the case of a woman who had married about two years before. Instead of being confined as was expected at the usual time nothing occurred, but she remained with all the symptoms and signs of pregnancy. After several months this material from the bowels began to escape, but the question whether it was or was not placenta was not decided by our curator, good microscopist though he was.

The end of the case was that one night my father bade me be ready early before lecture to call in Park-lane and make a post-mortem examination. I did this and found a fully developed infant in the abdominal cavity and the remains of a placenta adhering to the intestine. It was clear that the substance which had been passed before death was placental tissue. I am afraid that the microscopical examination of placental tissue at almost all stages is not as conclusive as one would wish or can claim for it.—I am, Sirs, yours, truly,

West Kensington, April 14th, 1896. ROBERT LEE.

VENTRO-FIXATION.

To the Editors of THE LANCET.

SIRS,—*Apropos* of your report of the discussion on Ventro-fixation at the British Gynæcological Society on the 9th inst.

one is very much struck with the great diversity of opinion as to the result and consequent advisability or otherwise of performing the operation. It appears to me that the great cause of this disparity of results is due in a large measure to the fact that most, if not all, of the operators speak of retroflexion and retroversion as one and the same disease requiring the same treatment. It is easy enough to understand that if one hangs up to the abdominal wall a retroverted uterus a practical cure may be expected; but very different indeed is the case with a retroflexed uterus, for here one has a flexion as well as a prolapse to overcome; therefore, it follows that relief is afforded so long, and so long only, as the tension between the fixation point on the abdominal wall and the attachment of the posterior wall of the vagina about the sphincter vaginæ is sufficient to straighten the flexion; hence it is that failure follows some operations from the first and others at various periods. It would be interesting to know the proportion of failures from operations undertaken for retroversion as compared with those undertaken for retroflexion.

I am, Sirs, yours faithfully,

Peckham, April 19th, 1896. ROBERT HUGH HODGSON.

1828—A PALEOLITHIC FRAGMENT.

To the Editors of THE LANCET.

SIRS,—In Chapter XV. of the very interesting Biography of the Founder of THE LANCET, published in your issue of April 11th, the causes which led to the action for libel brought by Mr. Bransby Cooper, Sir Astley Cooper's nephew, against Mr. Wakley are reviewed. After the operation of lithotomy performed by Mr. Cooper had ended so disastrously the following epigram, which may amuse some of your readers, went the round of medical circles in the metropolis:

> "When Astley's 'nevvy' cut for stone
> His tolls were long and heavy,
> The patient quicker parts has shown—
> *He* soon cut Astley's 'nevvy.'"

The verses, perhaps, fall into the category of neither good nor bad (the "sunt quædam mediocria" of Martial), but they appear to have been greatly relished in 1828.

I am, Sirs, yours faithfully,

April 20th, 1896. W. W. J.

"PUBLIC HEALTH APPOINTMENTS AND THE 'LOCAL' CANDIDATE."

To the Editors of THE LANCET.

SIRS,—As a medical officer of health of ten years' standing and an applicant for public health appointments in various parts of the country I can corroborate every word written by "Semper Vigilans" in THE LANCET of April 18th. I had some time since written a somewhat similar letter to his to draw the attention of the profession to this injustice to a large number of well-qualified members of the public health service. When a vacancy is advertised in the medical papers everyone naturally concludes that it is a *bonâ-fide* vacancy. Many men, misled by the appearance of genuineness, go to the expense of having testimonials printed and sending these and copies of their applications to a large number of members of town or district councils. These men are not aware that in 999 cases out of 1000 the post is virtually filled up before the advertisement appears and that the advertisement is put in the papers simply to comply with a by-law of the council which directs that the post shall be advertised vacant. A man's qualifications for the post, no matter how good they may be, are as nothing compared with a little local influence. Through these spurious advertisements men are dragged sometimes from long distances to some of the most outlandish places simply to be made fools of. Then, again, the advertisements frequently state that canvassing will disqualify, but this applies only after the advertisement appears and after the local man has been all round and secured his votes. In many cases, too, even after the appearance of the advertisement the local man goes on quietly with his canvass. The councillors wink at this, but let an outsider attempt the same thing and their righteous indignation (!) bursts forth in an instant and knows no bounds. To prove what I say I will give only one example from among many that I know of personally. This example is by no means an isolated one, for such things are of almost daily occurrence.

An advertisement appeared in the medical papers last autumn for a medical officer of health to the rural district council of ——shire. Eleven men applied from all parts of the country, with, of course, the inevitable "local" man. *There was no selection of candidates.*

Candidates were told in the advertisement to attend and ten of us did. The outsiders were men with good public-health qualifications—D.P.H., B.Sc., &c.—and their experience of medical officer of health work extended from one to ten years. The local man was almost unanimously appointed. Now this I consider a gross injustice to the ten outsiders, who were trusting to their qualifications for the post and were expecting to be judged on their merits. The payment of third-class railway fare does not compensate a man for the loss of a day's work, much less for the annoyance of being fooled. Then, again, it is an injustice to the ratepayers of the district. The cost to the ratepayers of the rural district named in this case was about £10, a totally unnecessary and unwarrantable expense to them. In my opinion it would be far more honest either to not advertise at all or to add a postscript to the advertisement stating that there is a local candidate in the field. Surely one has a right to ask for common-sense and justice to be exercised in all cases of this kind. This injustice and many others to which we have at present to submit are potent reasons why the supervision of the nation's health should be in the hands of men who are State appointed instead of being in the hands of men appointed by any little local body who have failed to grasp the importance of the duties they have undertaken to perform. Trusting that this matter will be thoroughly discussed, I am, Sirs, yours faithfully,

April 21st, 1896. DECENNIUM.

VACCINATION: A SUGGESTION.

To the Editors of THE LANCET.

SIRS,—As small-pox now appears to be so prevalent in many districts, and so many people evade the law, I think if boards of guardians, instead of appointing a public vaccinator for a district, would allow parents to take their children to the medical man of their choice, the board to pay for each successful vaccination the sum of 2*s*., there would not be any excuse for parents failing to fulfil the vaccination laws. I always vaccinate free all children whose births I attend and never now find any opposition from the parents.

Yours faithfully,

April 21st, 1896. VACCINATOR.

THE BATTLE OF THE CLUBS.—XXVIII.[1]

(FROM OUR SPECIAL COMMISSIONER.)

(*Continued from p. 1026.*)

WALSALL:—FORMATION OF A MEDICAL UNION.—THE MEDICAL PROFESSION AND THE FRIENDLY SOCIETIES.—TRADE AND MEDICINE.—THE FAMILY CLUBS.—WOMEN'S PUBLIC-HOUSE CLUBS.

THE Battle of the Clubs is no new cry in Walsall. It is a subject which has attracted the attention of the public and the profession for many years. There have been any amount of disputes, public meetings, discussions, controversies

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Aug. 24th, 1895, Brussels; (2) Aug. 31st, 1895, Brussels; (3) Sept. 21st, 1895, Portsmouth; (4) Sept. 28th, 1895, Portsmouth; (5) Oct. 5th, 1895, Eastbourne; (6) Oct. 12th, 1895, Lincoln; (7) Oct. 26th, 1895, Lincoln; (8) Nov. 2nd, 1895, Grimsby; (9) Nov. 9th, 1895, Bexhill-on-Sea; (10) Nov. 16th, 1895, Hull; (11) Nov. 23rd, 1895, Hull; (12) Dec. 7th, 1895, York; (13) Dec. 14th, 1895, Northampton; (14) Dec. 21st, 1895, Fermanagh Medico-Ethical Association; (15) Dec. 28th, 1895, Northampton; (16) Jan. 4th, 1896, Birmingham; (17) Jan. 18th, 1896, Birmingham; (18) Jan. 25th, 1896, Club Practices in Rural and Mining Districts; (19) Feb. 1st, 1896, The Formation of a Provident Medical Association at Folkestone; (20) Feb. 8th, 1896. The Manchester Medical Guild and Medical Aid Associations; (21) Feb. 15th, 1896. The Leicester and Leicestershire Provident Dispensary; (22) Feb. 22nd, 1896. The Organisation of the Profession at Leicester; (23) March 7th, 1896, Loughborough: Local Efforts Defeated by Consultants from Neighbouring Towns; (24) March 14th, 1896, Medical Aid Societies in Small Heath; Medical Clubs at Stockport; (25) March 21st, 1896, General Meeting of the Profession and the Formation of a Union at Nottingham; (26) April 4th, 1896, Nottingham; the London and Manchester Industrial Assurance Company, Limited; the Public-house Medical Aid Clubs; United Action at Lincoln; (27) Leicester and Wolverhampton; a Hastings Dispensary wound up.

in the press, and even lawsuits on the subject. The principal cause of the quarrel was the formation of the Walsall Amalgamated Friendly Societies' Medical Association, now more than ten years ago. The medical men in the service of the various benefit societies at that time were naturally not a little annoyed to find that the members they were in the habit of attending in their own surgeries would be taken away from them and placed under the care of the stipendiary physicians the association was about to employ. The organisers of the movement, however, persuaded the members of the friendly societies that it would be much better if they had a medical officer who would be exclusively at their service. They said all they could against the old system, so that when the association began its work there was no disguising the fact that it was run to the detriment of the local practitioners. The latter on their side did not fail to show a marked aversion to the newly-formed institution. Not a few members of the friendly societies were pained to find that the medical attendants to whom they had been accustomed all their lives no longer recognised or saluted them. Many members hesitated to join the association; they felt that if it failed they could expect but small mercy from their former medical men if they were forced to return to the old system. Thus the formation of the Friendly Societies' Medical Association set up a state of enmity between a large section of the community and the local practitioners. So marked was this unhappy state of affairs that when it was proposed to establish a similar institution in the neighbouring town of Bloxwich the president of the Walsall association warned the friendly societies of Bloxwich to be very careful and not to proceed further with their scheme unless they were sure of success, as they could not expect much kindness from the local practitioners if, after acting against the interests of the medical profession, they were to fail in establishing their association. As a consequence of these hostile feelings the patients of the Friendly Societies' Medical Association did not care to call into consultation local consultants, and therefore sent to outlying towns for consultants, and this entailed much extra and unnecessary expense. The same argument applied to cases of emergency when the members of the association wished to call in a private practitioner and yet feared to do so. Under these circumstances the association found itself in difficulties. It had not many members, and to increase the number of members it tolerated all manner of abuses. Rich persons were allowed to join, and some laxity was shown with regard to the granting of medical certificates to malingering members. If the medical man, as a matter of conscience, refused such certificates complaints were lodged against him, he was brought up before the committee, and the latter, instead of supporting him in the execution of his duty, inflicted a reprimand. "Anything to oblige" was the policy they enforced on their "paid and humble servant" the medical officer. One of the Foresters' Courts, "Garibaldi," however, complained through the secretary of the court of the excessive amount of sick allowance that had been paid to the members. Another club also protested; members were constantly ill when they wanted a holiday or were out of work. The clubs therefore complained because medical certificates were too easily granted. On the other hand, if the medical officer showed a little independence and refused a certificate when he saw that it was not really required the disappointed member at once sought, and often with success, to form a party which acted against the medical officer, created imaginary grievances and sometimes even obtained his discharge.

In respect to the granting of medical certificates of illness I found at Walsall plenty of evidence that this, though a difficult matter in all practice, is fraught with more than usual perplexity for the unfortunate stipendiary medical servant of a friendly societies' dispensary. If a private practitioner refuses to give a certificate to a patient he may vex and even lose his patient, but nothing worse than this can happen. The club medical officer runs the risk of losing not one but all his patients. Yet if he gives certificates too freely he increases the calls upon the sick fund and thus again exposes himself to blame. His position is far from enviable.

In spite of these obstacles the Walsall Amalgamated Friendly Societies' Medical Association in the course of time managed to make considerable progress. Though this success was undoubtedly in a great measure due to the skill and devotion of the medical officers, these latter were not allowed to share in the profits that accrued. A letter dated Oct. 25th, 1892, appeared in the columns of THE LANCET written by Dr. D. Riordan, who was medical officer to the association when it had only 1800 members. He then received £180 with the promise that the pay should be raised to £200 as soon as the Association proved a success. This was done in the course of a year, but no further advance was ever granted, though the number of members ultimately reached the figure of about 4500. The adults paid 3*s*. 6*d*. per annum, the juveniles 2*s*., and out of this sum the medical officer only received 10¾*d*. It is not surprising that Dr. Riordan gave in his resignation. Dr. Riordan found that he lost much time in attending to chronic cases, or to malingerers, or to persons who came simply for the purpose of obtaining a little instruction and seemed to imagine that because they paid 3*s*. 6*d*. a year, of which the medical officer only received about 10*d*., they had the right to come and question him on scientific or health topics whenever they felt themselves studiously disposed. As a result the medical officer had not sufficient time remaining to attend properly to the serious or genuine cases of illness. Then there was always a tendency on the part of ignorant, inexperienced committee men to become tyrannical. They would take up all complaints and think they were showing their zeal by abusing the medical man. It is true that, in time, the committee realised the error of their ways and made inquiries before they summoned their medical officer to appear before them. As these committee men are, for the most part, workmen who only earn from thirty to forty shillings a week, they look upon the £3 or £4 a week given to their medical officer as a princely income and that no service can be too great in exchange for such a large sum. Yet some of their members are in receipt of much larger incomes. A town councillor for instance, belongs to the Friendly Societies' Medical Association. He pays 3*s*. 6*d*. a year for himself, 3*s*. 6*d*. for his wife, and 2*s*. each for his children. He drives to town in a carriage. He owns house property to considerable value, employs many workmen, and makes a large income. On one occasion he had a dispute with the medical officer of the association, so he took his sick child to see a physician at Birmingham. Then he brought back the prescription and expected the Walsall Association to make up the medicine free of charge.

A great reform would be accomplished if medical aid was given only to the *bonâ fide* full members of the friendly societies. But the canvassers of these societies do not confine their action to the *bonâ fide* members. They include in their canvass the wives of members, the relatives, and perhaps even the mere friends of the real member. All these latter are brought in only for medical benefits. Therefore it is very easy to get on the medical officer's list of a benefit society, for it is not necessary to join the benefit society in any other respect than that of paying the medical aid subscription. Consequently when people find that their medical attendant charges them the ordinary fees they complain, threaten to join a friendly society, and this threat is often realised. The medical aid organisations are spreading all over the country, breaking new ground every day, and, if we note what the effect has been in Walsall, it will not be difficult to realise that, unless the profession are able to resist this movement, medical men will soon be crushed and driven down to a much lower social stratum. The change that has come over Walsall is very marked. The big practices that existed some twenty years ago and were worth from £1000 to £2000 a year have now gone. When the owner of such a practice dies the practice dwindles, it cannot be revived. If a medical man has no private means or a rich wife to help him he can no longer keep up the old social status of the profession.

Apart from the friendly societies, there are any number of insurance companies at work here which organise medical aid. As a result there are entire streets where not a single private patient can be found. These streets are never visited by other than club practitioners. Two-thirds, if not three-quarters, of the population of the town are members of some sort of medical aid society or else become hospital patients when ill. The result is that the great majority of the practitioners at Walsall must have clubs or starve. Now club practice must be a question of quantity, not of quality, and, if club practice is the main source of income, then an immense number of patients must be seen in an incredibly short time. This again must lead to errors of diagnosis,

prejudicial to the preservation of public health. In no case is the ability or the qualifications of the medical men who committed these errors subject to any sort of question or doubt. No one is to blame, the blame rests entirely with the system which does not give the medical man sufficient time to examine the patient. A Walsall practitioner informed me that, when doing similar work at Birmingham, he was allowed just one minute to see club patients, and if he exceeded the regulation minute a loud knocking at the surgery door brought the consultation to a close. These are facts on which it is impossible to lay too much stress, for they concern the public at least as much as the profession. They clearly show that if medical men are driven to rely on club practice alone the public will and must suffer. The clubs themselves do not seem to understand that the greater the number of members the worse must be the medical attendance, unless the number of medical officers employed is proportionally increased. At Walsall the Friendly Societies' Medical Association paid their medical officer the same salary when he had to attend to 4000 members as they had given him when there were only 2000 members, and they even refused to allow an increased expenditure for cab fares.

Dr. Riordan was succeeded by Dr. Lynch, who certainly proved one too many for the friendly societies. First he spread terror in their ranks by ordering expensive drugs which they had never heard of before. When the committee complained he appealed to the members, quoted the rule which said they were to have the best medicines, and pointed out that he was obeying their own rules and this in their own benefit. Many members of the society rather approved of this sort of reasoning and when the committee compelled Dr. Lynch to leave some 1800 of the members followed him and established a Walsall Medical Association No. 2. Then the remnants of the old society attacked him for breach of contract because he had pledged himself not to establish a rival practice in the immediate neighbourhood. To this he objected that association No. 2, being composed of members of association No. 1, could not be considered as a rival body. He had as much right to serve the one as the other; both had been his employers. Association No. 2, it is true in the course of time became, practically speaking, a private club in Dr. Lynch's hands; and though he had to pay damages to association No. 1, nevertheless the advantage of independence and of managing his own affairs amply repaid the cost and loss of the lawsuit. This split has taught wisdom to the Walsall Medical Association No. 1. Their present medical officer has not the same grievances as his predecessors. He declared to me that during the two years he had been in their service he had had no complaints to make; he had received no reprimand, and there had been no disputes. His salary had been increased from £168 to £180, and he was under the impression that it would continue increasing as the number of members augmented. Actually there were 2583 members. During the year ending 1895 he had paid 6115 visits and given 13,025 consultations—total, 19,140. For this enormous amount of work he had been paid £168, or on an average a little under 2*d*. per visit or consultation. Even if to this we add the value of house, taxes, gas, &c., provided for the residence of the medical officer, it scarcely brings the average up to more than 2½*d*. per patient seen. Of the 3*s*. 6*d*. paid by adults and the 2*s*. by juveniles as their annual subscription, the medical officer received 1*s*. 1*d*. Of course, when there is such an amount of work for so little pay it is not surprising that complaints should arise of neglect.

Of late years there has been a great increase in Walsall of what are called family clubs. These are to a large extent organised by the collectors of the insurance companies. The collectors of the ——— Company are particularly active in this respect, though the superintendent of the company is altogether opposed to the practice. Nevertheless, most of his agents while collecting the premiums for life insurances persuade the people on whom they call to join the private family club of some private medical man. The general charge is 4*d*. per week for the whole family. The medical man has to give the agent a commission of 25 per cent. and the first four premiums paid. It ominously and often happens that when the family has paid for four or five weeks or so they quarrel with the agent, so that the medical man gets nothing at all. Then the canvasser will set some other agent on to the same family, who in his turn pockets four weeks' premiums; thus the people pay for eight weeks, and during that time the medical officer must attend them if they fall ill though he receives nothing whatsoever for his services. Then, again, the rule is that the family must be in good health when insured, but it is suggested that if there is anybody ill the agent takes them all the same, makes them pay a month's subscription, antedates the receipt, and declares that they had joined before the illness commenced. Thus the agent pockets at once his 1*s*. 4*d*., and the medical man has a sickly family thrown on to his hands which he must attend for 4*d*. per week, minus 25 per cent. or a penny per week commission to the agent. Nevertheless, if this is worked on a commercial basis with the aid of assistants qualified and sometimes not qualified and done in a wholesale manner a comparatively large income can be obtained. Of course it means cheap medicine, scant attendance, and occasional errors of diagnosis, due not to ignorance, incapacity, or obscure symptoms, but simply to the excessive hurry of such work. There is one Walsall medical man in particular who has an enormous practice of this description. Some of his colleagues assured me that it was their conviction that he must have in all something like 10,000 club-members on his books. During the influenza epidemic the road in front of his house was blocked with patients and their friends trying to gain admittance into his surgery. On calling upon this gentleman I found that he had little or nothing to complain about. He maintained that a sort of wage limit, so far as family clubs are concerned, had been established. No family living in a house of a yearly rental exceeding £14 or £15 was accepted. Then he rejected persons suffering from chronic illness and would not attend to accidents or confinements. He further declared that, for the principal clubs, members were examined before they were admitted, and finally maintained that Walsall was "a town of daily bread," so that it was impossible to obtain the usual medical fees from such a population.

There are also in Walsall a number of private individuals who run a variety of businesses with the aid of medical men. For instance, the Walsall Good Samaritan Medical Aid Society, established in 1879, is managed by a Mr. Brookes, who qualifies himself as a "life, fire, plate-glass, and accidental assurance agent." He has no less than six local practitioners in his service and collects 1*d*. per week per member or 4*d*. per family. Another ingenious individual combines the sale of mangles with the providing of medical aid in case of illness. The "Minerva" of Birmingham, which is also a private speculation, employs five medical men at Walsall; in fact, it seems as if the services of medical men are to be used as a bait for any sort of business, but the most scandalous of all are the public-house women's clubs. These are far worse than the slate clubs of Grimsby and the public-house "sick and annuals" of Nottingham. The principal object of several of these clubs is to provide for funerals; a gloomy subject for which drink is a natural antidote. In any case, and for fear doubts should be entertained as to the efficacy of such an antidote, a special rule provides that the members must drink. The printed rule of one public-house club says that the members of the society shall meet at the public-house in question every fortnight, and the members must then "pay six-pence contribution money and three halfpence for ale." Those who are in arrears are to be fined. I was informed that ninety women belonged to this club. They have thus guaranteed the publican a minimum sale of ninety tankards of ale once a fortnight. Those who do not attend have to pay all the same and the beer is served. Therefore those who are present drink not only their own share but the share of the absent members. This naturally leads to a great deal of drunkenness among these women. As one of the objects of these public-house clubs is to provide not only funeral expenses but medical aid, the medical officers attached have a choice supply of alcoholic patients. Considering the rule quoted above, there can be no doubt that they lend themselves to provoke the intemperance which causes the diseases they are subsequently called upon to treat. By these means women are enticed and encouraged to frequent public-houses. Under the pretext of thrift, armed with the plausible excuse of providing for a rainy day, they meet a crowd of boon companions in a public-house and egg each other on to drink.

Mr. Willmore invited all the members of the profession to meet so that I might relate what had been done in other towns and so that some effort might be made to form a medical union. Twenty-five invitations were issued and

sixteen local practitioners were able to attend. Mr. Willmore opened the proceedings by explaining that this was but a preliminary meeting convoked for the purpose of seeing whether any sort of action was possible. Even if for the moment nothing very startling could be done, still it would be a good thing if the members of the profession could arrange to meet each other on certain days. This would help "to rub off the corners" and lessen much of the animosity and asperity which were so detrimental to the interests of the profession. At the new hospital, which would be completed in the month of May, there was a board-room where, if a medical society was formed, meetings could be held. There were many grievances to be dealt with. Clubs might be necessary, but touting was not necessary. Then there were the herbalists who had not the qualifications of dispensing chemists and yet they gave consultations, prescribed, and made large incomes out of the practice of medicine. Druggists were also very prone to prescribe, but if such abuses were to be abolished there must be cohesion among the members of the profession. Mr. Willmore then called upon me to address the meeting. After giving what information I could crowd into a short speech dealing with the grievances that prevailed and the remedies that had been attempted, I insisted on the necessity of forming at once a medical union to deal with ethical and economical questions. Some amusing though somewhat despondent speeches followed. One speaker thought union was impossible because ethics in Walsall were an unknown quantity and nothing could be worse than the actual condition of the personal relations between the local practitioners. The general tone of the speeches clearly showed how low the profession had fallen. There was a general cry of "stinking fish." One speaker complained that touting had been set up and organised by medical men who employed insurance canvassers and outbade each other by offering larger and yet larger commissions so as to secure the services of the best canvassers. Competition had become an excuse for every iniquity and it had stamped out all sense of medical etiquette. One practitioner explained how, on arriving at Walsall, he had stoutly refused to have anything to do with the clubs; then, finally, he took people at 10*s.* a year. The result was that about three persons joined his private club, but, as during the first three or four months they did not happen to fall ill, they concluded that they were paying too dearly, so they left him and went to an institution where the subscription was not more than 3*s.* 6*d.* a year. At last he found that he must do what all the other medical men did and take what clubs he could get at the terms currently paid. Nor would it be easy to ask the local practitioners to give up clubs that brought them in £100 or £200 merely on a question of principle. Whatever clubs one medical man might throw over other practitioners would gladly take up. Yet everyone acknowledged that club work was ruining private practice.

From all this it would seem as if the cause of unionism has but poor prospects of success at Walsall. This is not the case. The medical men who attended the meeting were suffering from angry feelings too long pent up. Having now at last had their say they felt wonderfully better. No prescription ever effected a more rapid cure. Practitioners who had not so much as bowed to each other for two years were now found cordially shaking hands, and after some little hesitation and some desultory conversation, with one abstention and no hostile vote, a resolution was carried that a committee of six members should be elected then and there for the purpose of taking the initiatory steps necessary for the formation of a medical union to deal with ethical and economical questions. The meeting also unanimously adopted a resolution expressing its thanks to THE LANCET for the service rendered in raising the whole question. The committee was elected by ballot and then the meeting adjourned. In subsequent conversations I found that some of the speakers who at first deprecated the idea of forming a union had become quite enthusiastic in the cause. It was pointed out that three of the medical men who had not attended were partners and therefore constituted but one firm, and their position was such that even if they did not join the union they would not act against it. Others were the salaried officers of friendly societies and scarcely free to act, so that the number who actually attended and voted for the formation of the union was much larger than could reasonably have been expected for a first effort. The chances of success were, therefore, greater than had been anticipated, and it would be strange if with so fair a beginning good results did not accrue.

THE ASHANTI EXPEDITION.

(BY OUR SPECIAL WAR CORRESPONDENT.)

III.[1]

The Water-Supply of the Troops.

VARIOUS, indeed, have been the causes adduced for the production of malarial or coast remittent fever. For instance, some have suggested "planetary influence," others "want of elasticity in the air"; not a few have thought "withdrawal of elasticity from the human body" had something to do with it, whilst the majority believe the disease has its origin in decomposed organic animal and vegetable matter and general impurity of the water, the last of these coming in for the lion's share of professional suspicion. It was at one time thought that sulphuretted hydrogen gave rise to the complaint, even so celebrated a traveller as Humboldt to a certain extent favouring this idea; but various expeditions sent to the west coast of Africa since his time have in no way helped to solve the problem or done anything to satisfy us on the point in dispute. The ablest scientific researches, carefully conducted by medical officers sent out for the purpose of recording their observations, have one and all rather disproved than otherwise the accuracy of any single suggestion. Whatever may be believed about the admixture of salt and fresh water being capable of producing a special form of fever at the deltas of rivers, the same cause ceases to operate at any distance from the coast or at places away from the direct influence of the sea, such as at Ashantiland, where remittent fever of a virulent character exists probably in an endemic form the whole year round.

Recognising, however, the very great importance attached to a proper supply of good wholesome water for the use of our troops engaged on an expedition such as that to Kumasi, I took care to make a careful chemical examination of nearly all the sources—from Cape Coast Castle to Kumasi—from which a supply had been obtained, and with only two exceptions did I discover *en route* any positively bad water or see the fluid in such an impure condition that it could not, after boiling or filtering, have been partaken of by the men with impunity. Of the two places referred to where the water was qute unfit for use even after precautions had been adopted, one was at Yacumba on this side, and the other at Akusirem, on the further side, of the Prah. Moreover, I thought it best to corroborate my qualitative examinations by sending some specimen water carefully obtained from a river at the rest camp called Mansu to England, so that it might be subjected to a qualitative and quantitative analysis in THE LANCET Laboratory. This said sample, a very fair all-round specimen of what was drunk by the troops out there, has turned out to be quite usable after boiling, for, as the report from THE LANCET Laboratory says: "The water submitted for examination contained a marked amount of organic matter held in solution, yet it was less open to objection because there was no indication that these matters were of animal origin or derived from animal excreta. It was slightly turbid, containing a deposit which, on microscopical examination, proved to consist of vegetable débris. The sample only measured 10 oz., so that it was not possible to make a very exhaustive analysis. On withdrawing the cork a distinct smell of sulphuretted hydrogen was evident, proved by the blackening of a slip of lead paper introduced therein. The presence of this sulphuretted hydrogen, however, could easily be attributed to a reduction of sulphates during transit in a closed bottle by the vegetable matters held in solution, for the water in its original state does not appear to contain any trace of this gas whatever. The total amount of solid matter amounted to 11·9 grains per gallon. On ignition charring occurred and a smell was evolved of vegetable but not of animal matter burning. The reaction for phosphates in the residue was hardly perceptible. There

[1] Nos. 1 and 2 were published in THE LANCET of April 4th and 11th, 1896, respectively.

was an entire absence of chlorides. The free ammonia amounted to 0·028 grain per gallon and the albuminoid ammonia, which came off very slowly, to 0·042 grain per gallon." The report concludes: "As might be expected in the presence of sulphuretted hydrogen, neither nitrites nor nitrates were to be found." These views correspond with those expressed by myself after examination of the water at the various rest camps, and must go a long way to show that the water-supply has not proved nearly so impure as was expected, and that the bulk of the water after boiling or passage through a filter might be partaken of without fear of unpleasant results.

At Yacumba, the first halting station, only some seven miles distant from Cape Coast Castle, the supply of water had to be brought to our camp from a sluggish stream some two miles distant from our camping ground. Its colour was of a reddish brown. Moreover, it was quite devoid of transparency and possessed a disagreeable fœtid odour. The rivulet ran through a sort of glen, and its bed was probably some thirty or forty feet below the higher land on which the native huts were erected. Into it several surface drains evidently emptied their contents by a common duct, which could be traced to and communicated with the native township above. Hence the source of native pollution could without difficulty be most easily accounted for. Chemical tests gave positive evidence of its impurity and clearly showed its unsuitability for either drinking or culinary purposes. Major Sinclair, R.E., lost no time in communicating these facts to the headquarters' staff, so as to avoid the use of it by the troops on coming up.

At Akusirem, another rest camp on the other side of the River Prah, matters were even worse. This halting place was selected by one of the colonial authorities, and the camp dwellings were erected by an officer in their employ. Of all the camp sites selected *en route* to Kumasi, this one without a doubt was the very worst selection. To commence with, it was approached and surrounded by a succession of wretched, dismal, offensive-smelling, malarial-reeking swamps. The site was very low, and, to crown all, possessed no proper water-supply whatever. True, on its northern side there existed a sort of mud hole containing a collection of dark-coloured, offensive-smelling fluid which by no stretch of imagination could ever be called usable water, for it consisted simply of drainage percolating through loose sand from an old plantain garden (very possibly a disused native burial ground) above it. To all tests it gave unanswerable results. When seen its impurity was recognised by the principal medical officer, and on his suggestion the desertion of the camp was determined on by the staff as soon as they had arrived on the ground; but this decision was arrived at some time after my own report regarding the character of the water and the other insanitary conditions of the *locale* had been telegraphed back by an officer. Why any delay at all should have occurred in deserting it after the receipt of that telegram by the executive remains yet to be explained, considering that two white officers were then very ill in bed with severe attacks of remittent fever. I am not prepared to say what definite position the civil medical profession held with reference to the military out there; but this I do know, that many of the surgeons in the employ of the colony (in fact, I was told so by them) looked principally for instructions issued by the head of their own department, and scarcely considered themselves in a position or at liberty to act under any other authority. There is a trite saying, "Between two stools one is apt to come to the ground," and this is particularly applicable to military medical organisation. In the field there should be only one responsible head of the department—the principal medical officer, and his position should be unquestioned and his orders unhesitatingly carried out by the civil as well as the military element acting in concert under him.

Barracou village is situated higher than any of the rest camps this side of the Prah, being some 500 ft. above sea level. Its surroundings are free from objectionable swamps, while the water procured from a running stream near the native village proved excellent on examination. This place was a rest camp during the previous Ashanti War, but was not used as such in the later expedition. Its exclusion from the number of sites chosen probably arose from mileage considerations, the *locale* not dovetailing in with the requisite length of marches decided on. Be that as it may, Barracou is an excellent site for a rest camp and much more suitable from a sanitary point of view than Assin-Yankumasi, which had been selected in its stead, possibly because it is a few miles more distant from the Prah.

At Assin-Yankumasi the water was obtained from a stream, and although not quite so transparent as one could wish, it nevertheless gave negative results with nearly all the tests employed except Nessler's solution, which showed a slight colouring of the fluid when compared with a tube full of distilled water.

During my stay at the Prah River the Pasteur-Chamberland filters, six in number, were brought up. Their arrival was hailed with considerable satisfaction, because it was hoped that the officers and men who had up to that time been forced to drink (previously boiled) river water would now be supplied with a purer and much more wholesome fluid. Being present when their component parts were being put together by the man in charge I had an opportunity of judging of their suitability for the rather rough use incidental to a campaign like that on which we were then engaged, and I must frankly admit that the parts seemed to me to be too numerous and the internal fittings too complicated and likely to get out of order for the rough-and-tumble work to which they were inevitably to be subjected.

To begin with, each of the large galvanised cisterns, supposed to contain many gallons of water, is supported by three long, round, half-inch metal legs. More than one of these bent under the superimposed weight when the tank had been filled with water, or perhaps sank deeper into the earth than its two fellows, and by reason of the list given to the cistern was apt to throw the whole apparatus out of working order. Then, again, there was considerable delay as well as difficulty experienced after getting the bougies into position to secure the lids properly. The rubber bands did not appear to fit in the grooves as neatly as they might be expected to do. Vulcanised material, as everybody knows, perishes or becomes unfit for use very soon after exposure to air in a tropical climate, and its adaptability for the exclusion of air in an apparatus of this kind was not by any means satisfactorily shown as far as I could see. It took some hours before one of these filters could be brought into anything like working order, and when this was accomplished the supply of filtered water fell considerably short of what was expected. After some trials it was found absolutely necessary to do away at once with the useless metal tripods. A more solid foundation for the cisterns in the shape of wooden trestles was supplied. The metal tanks were placed on these supports and relays of natives requisitioned to turn the handles and keep the supply of water up, but in spite of all efforts the result was unsatisfactory, only some forty gallons of filtered water being the result of over six hours' work. Naturally such a result was extremely disappointing. During my stay of some days at the Prah these several filters were more than once taken to pieces—overhauled and carefully cleansed—in order to ascertain if any accumulation of dirt or débris interfered with the working of them, but all to no purpose in effecting any decided improvement in their efficiency, for instead of turning out a sufficient supply of purified water for some 300 or 400 soldiers, as they were expected to do, they failed to afford a third of the amount required for the daily consumption of our men. The result of this failure was that an order had to be issued by the headquarter staff that all the filtered water was to be reserved for the use of the sick, and the healthy had once more to return to the drinking of what was collected by the riverside. Not only were our filters at Prahsu breaking down, but we learnt that at Fosu, where two filters had been left, the authorities were complaining of their inefficiency. "One worked very indifferently and the other not at all." Need I add what a disappointment this proved to us all, who had been led to expect so much from the Pasteur-Chamberland filter? An expert who had been summoned from Cape Coast Castle with a view of setting matters right told me they were larger cisterns than he had been accustomed to. If this be so or not I am unable to say; but all I can vouch for is that they in no way accomplished what was expected of them. The principle (hydraulic pressure) upon which the Pasteur-Chamberland filter is constructed is unquestionably a good one. No one having seen the apparatus in operation can doubt this for a moment. However dirty or discoloured the water may be on introduction, whatever quantity is passed through the filter comes away as bright and clear as possible, every impurity is arrested and may easily be seen and scraped off the surface of the bougies when the lids are removed and the candles are unscrewed for the

waterfall in a pretty glen near the Monsi Hill, where the water was tested by the Special Correspondent of THE LANCET whilst on the road towards Kumasi. The spring was found situated just abreast of the tent shown pitched near the centre of the illustration. To the left the stream is represented running down to the Kwissa camp, the tops of all the trees in the background being hidden in a dense white fog.

purpose of cleaning them. The failure that occurred out in Ashanti was, therefore, one concerning quantity more than quality, and a little more care in their construction may possibly obviate this defect in the future. All use of vulcanised rubber should be avoided, and, if it were possible, automatic rather than manual power should be employed for their operation. In war time, especially during the forward march of troops, it may be rather difficult at times to secure sufficient men to turn the handles of these filters, which manipulation must be provided for if a proper supply of pure and wholesome water has to be kept up. Speaking one day to Surgeon-Colonel Taylor about the unsatisfactory working of the filters that had been supplied for the use of the expedition, he happened to remark that "he had noticed a small narrow stream crossing the road about half a mile out of camp and had seen natives collecting water thereat," and "he wondered whether this was of better quality than that obtained from the river," and "could I trace it up to its source?" Of course I consented, and left him with the determination of searching for the spring of this rivulet as soon as I could. The opportunity for starting on this search presented itself very early the following morning. About 4 A.M. I left camp and came upon the stream in question about three-quarters of a mile on the Barracou road. It was scarcely six inches in breadth. Tracing it in a north-north-east direction for some half a mile or so I found it divided, one branch, the north-east portion, running to the River Prah, while the other coursing but a short distance seemed to be joined by another little rivulet down which water very clear and bright seemed to be coming from a south-south-east direction. I had much difficulty from the immense amount of tangled undergrowth that lined its banks in tracing this stream up to its source, some four hours being occupied in the endeavour, but its spring was at last discovered and I had the satisfaction of bringing back to camp a bottle of the clearest and best water that was ever secured *en route*. Surgeon-Colonel Taylor was delighted with the pure supply that I had through his hint been enabled to discover. From this time no more river water was required during our stay at Prahsu.

Across the Monsi Hill I had another opportunity of testing a spring of really excellent water, which coursed down and supplied the troops at the rest camp of Kwissa (vide illustration).

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester and Salford Sanitary Association.

ON Sunday evening a sermon was preached in the Manchester Cathedral on behalf of the above association by the Rev. C. V. Gorton, Vicar of Morecambe. His subject was "The Laws of Health, the Laws of God." He said that in the Scriptures the word cleanliness was synonymous with holiness, and that the Mosaic priest was really the medical officer of health. The old Greeks, whose aim was the physical perfection of the man, deemed sanitary law a portion of the moral code. He quoted Xenophon as giving one of the best descriptions of the officer of health: "When people are sick, physicians cure them; they are menders of old garments. But your care is to be of another kind: it is for you to prevent the army from becoming sick." (If our military authorities looked at matters more like Xenophon, there would be less cause for discontent in the Army Medical Service.) "It was strange," he said, "that in the early days of the development of Christianity and after the fall of the Roman Empire we looked in vain amongst European peoples for that regard for the law of God. The Church prayed, 'From plague and pestilence, good Lord, deliver us,' but was content to remain unmindful that national judgment was a natural consequence of national negation of the law of God." He reminded his hearers of Lord Palmerston's reply to a deputation requesting the appointment of a day of humiliation and prayer on the outbreak of cholera about the middle of the present century from the neglect of sanitary law: "When man has done his utmost for his own safety then is the time to invoke the blessing of heaven to give effect to his exertions." It was, he said, a good thing that the Manchester Sanitary Association was doing its best to improve all this. "It would be still better if the society were so supported that it could inaugurate branches in every town in the country which would investigate the physical causes of disease, note the rise of epidemics, educate public opinion, and organise the working classes to demand pure air and pure water, and not only a grave to be buried in, but sufficient space in which to properly live." It might have been as well if he had suggested to the "working classes" that when they got their pure air they should not do all they can, as is too much the case at present, to pollute or exclude it from their dwellings.

Our Milk-supply.

Under the auspices of the Milk Dealers' Protection Society of Manchester, Salford, and Surrounding Districts, a lecture was given on April 20th by Mr. W. Cox on Milk as Food in relation to Health. The chair was taken by a member of the city council, who said "the association existed for the purpose of protecting from undue interference a trade in an article that was indispensable to health. It had no sympathy with any milk dealer who violated the rules that were necessary for safeguarding the public health." He considered that the association was right in suggesting that the work of the corporation inspectors should not be confined within the city, but should be extended to the shippons and dairies from which the milk came; and in this we should all agree. Mr. Cox in his lecture did not speak from the standpoint of the man of science, and he would apparently laugh to scorn the patient labours of the bacteriologist, for he is reported as follows: "The idea that the germs of disease were spread by milk he described as 'a craze.'" Save in exceptional cases, in which the germs of scarlet fever or typhoid fever had been directly communicated to the milk by the persons manipulating it, milk had never proved injurious. These are pretty considerable exceptions to start with. He then contended that the facts disproved the idea that the "tubercle bacteria" could be communicated from the affected animal through the milk to the consumer of the milk. May it be inferred from this that Mr. Cox would advise the giving of milk from tuberculous cows to delicate children so long as the poor creatures were able to supply it? "He believed that such infantile diseases as were often attributed to milk were due either to the lack of milk or to the insanitary condition of the houses of the poor; and he said that the healthiness of the children of farmers and dairymen was the best answer to those who said that milk was not healthy." He believed that greater attention should be paid to the periodic inspection of shippons and dairies but apart from that "everything that was necessary was at present one to ensure the purity of our milk-supply." The retail dealers are, of course, immaculate and always take the most scrupulous care to avoid contamination by any even of those "germs" which Mr. Cox holds in such contempt. It is a pity that anyone should discourage the efforts made to secure good quality and purity in a food of such importance as milk, and especially that such discouragement should come from a member of the veterinary profession.

Ancoats Healthy Homes Society.

This society, of which Mr. Aldred is president, gave the last lecture and entertainment for the season on Thursday evening last, when Mr. W. P. Montgomery, assistant surgeon to the Ancoats Hospital, addressed about 800 people on Exercise and Training. The primary object of the society is to give instruction of a useful kind, and this work has been carried on for several years amongst the poorest people of the working-class district of Ancoats; but in order to bring together those who without some such attraction would not attend the additional bait of musical performances, between which the lectures are sandwiched, has been found very successful. The young people in Manchester as elsewhere are open to this influence, and these combined attractions have been successful in securing an average attendance of 650 people at the twenty-nine lectures given during the last session. The lectures and the services of the musical helpers are entirely gratuitous and admission to the entertainment is free. Useful information is given and something done to brighten what to most of us would seem the dull monotony of the daily life of these poor mill hands.

The Manchester and Salford Reformatory.

The fortieth annual report of this institution contains a very important little point. Referring to the falling off in the number of admissions, the report says that if this were due to a diminution of crime it would be a subject for congratulation, but "the governors desire deliberately to place

on record their conviction" that it is due to the magistrates committing boys of twelve and over, who have been convicted of crime, to industrial instead of to reformatory schools. The governors think this probably a mistake as regards the boys themselves, and "surely it is a wrong to the other inmates of the industrial school who are not criminals, and some of whom are committed for very different offences, that they should be compelled to associate with convicted thieves." They think the two classes should be kept separate, and earnestly commend this subject to the careful consideration of magistrates and of all interested in the reformation of juvenile criminals.

The Medical Guild.

The quarterly meeting of the Medical Guild was held on April 14th in the Victoria Hotel. The chairman (Alderman Walmsley, J.P.) presided. A discussion took place on midwives registration and afterwards on professional advertising, and the following resolutions, previously passed by the council of the guild, were adopted:—

I.—As regards midwives registration:—

1. That it is the duty of the profession to defend and maintain the Medical Acts.
2. That it is advisable that constructive legislation (defensive is understood) upon the midwives question should be undertaken by the medical profession.
3. That legislation should follow the lines of local registration and sanitary regulations.
4. That the minimum training should be six months' obstetric nursing in a public lying-in hospital or union infirmary, where the pupil shall be present at not less than thirty labours, in every case under the direct supervision of a registered medical practitioner.
5. That no examination should be required and no diploma issued, the sole guarantee of proficiency to act as a midwifery nurse being the certificate from the medical officer of the lying-in hospital or union infirmary, which enables her to be placed upon the local register.

II.—Professional advertising:—

1. While appreciating the legal grounds on which the verdict in Kingsbury *v.* Hart was given, the council expresses confidence in the editor and reference committee of the *British Medical Journal* in their action in the matter referred to in the libel.
2. That this council is of opinion that the evidence having reference to the ethical aspects of the case, Kingsbury *v.* Hart, indicates the distinct necessity which exists for the question of medical ethics being placed upon a firmer basis and dealt with in a manner satisfactory to the profession.

In dissenting from the views expressed by the plaintiff's witnesses in this matter the council suggests the desirability of more stringent and definite rules of medical ethics being authoritatively laid down for the guidance of the profession at large.

April 21st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh University: New Regulations for Graduation in Medicine.

THE Edinburgh University Court at its meeting last week approved the following resolutions regarding the requirements for degrees in medicine under the new ordinances:—A. Every candidate shall be required to attend in addition to present requirements: 1. A course of instruction in mental diseases consisting of not less than six class-room meetings for lectures and demonstrations and ten meetings in the wards of a recognised asylum for the insane. 2. Post-mortem examinations in a recognised hospital for a period of at least three months, during which practical instruction is given in the methods of making post-mortem examinations and in framing reports. 3. A course of clinical instruction in infective fevers given at not less than twelve meetings in the wards of a recognised hospital where clinical instruction is given on cases of infectious diseases. 4. Instruction in diseases of the eye at not less than twelve class-room meetings and twelve meetings for clinical instruction in the wards of a recognised hospital or in a hospital and dispensary, the course to include efficient practical instruction in the methods of examining the eye. 5. A course of operative surgery conducted by the professor or a recognised teacher. B. Every candidate shall also be required to attend any one of the two following courses: 1. Clinical instruction in children's diseases at not less than four lectures and ten meetings for clinical instruction in the wards, together with four meetings in the out-patient department with attendances at post-mortem examinations. 2. Instruction in diseases of the larynx, ear, and nose at not less than six class-room meetings and twelve meetings for clinical instruction. In connexion with the above it was resolved that no fee should be charged for attendance on post-mortem examinations and clinical instruction in fevers; that the fee for operative surgery be £3 3*s.*; for children's diseases, £2 2*s.*; and for mental diseases and diseases of the eye, £2 2*s.* each. The court also received a report by a committee appointed to consider the question o mixed classes in connexion with the medical education o women, and agreed to require that classes shall not be mixed classes except on special cause shown. The court recorded its deep sense of the munificence of the gift of £20,000 left by the Earl of Moray, and determined that it should be called the "Earl of Moray's Endowment."

Milk Prosecutions.

At the Dunfermline Sheriff Court three farmers were convicted of selling milk which on analysis was found to have had from 13 per cent. to 21 per cent. of normal fat abstracted from it, and were fined from £2 10*s.* to £5 for so doing.

Hospital for Infectious Diseases for Berwickshire.

The east district committee of Berwickshire have resolved to erect a hospital for infectious diseases at Ayton. The hospital is to be an iron structure and is to cost about £1000.

Glasgow University.

The formal closing of the winter session took place on the 14th inst., though the classes in the medical faculty ceased at the end of March. The graduation ceremony was presided over by Lord Kelvin, and though the degrees conferred were for the most part in arts, divinity, or law, a few medical graduates were also to be found. The following gentlemen received the degree of M.D.:—W. C. Allardice, M.B., John Donald, M.B., J. C. Robertson, M.B., R. T. Marshall, M.B., the latter being awarded "commendation" for his thesis on "The Mild Malarial Fevers and their Microbes." Mr. D. G. Carmichael was "capped" M.B. and C.M., and the same degrees with "commendation" were conferred on Mr. J. M. W. Morison. After the ceremony the honorary graduates lunched with the Senate, and Professor Gairdner, who presided, proposed the health of Mr. John Ure on whom the degree of LL.D. had just been conferred. Mr. Ure was the chairman of the first health committee in the days when Dr. Gairdner was medical officer of health of the city.

Tuberculosis in Cattle.

A conference of Scottish butchers to consider this subject was held in Glasgow on the 16th inst. The chairman in his opening address contended that butchers were being unfairly dealt with by many local authorities and medical officers of health insomuch as carcases purchased in good faith at the highest market price and in market's under the supervision of the authorities themselves were frequently ordered to be destroyed and yet no compensation was offered. He questioned the necessity for this procedure in cases of well-nourished carcases with a merely localised tuberculosis, but in any case if the interests of the community demanded it the loss should fall upon the public purse. Resolutions defining these views were afterwards passed and were ordered to be sent to the members of the Government.

Microscopical Society, Glasgow.

At the usual monthly meeting of this society on the 16th inst. Dr. T. H. Bryce, lecturer on anatomy, Queen Margaret College, gave a demonstration on "The Development of the Chick," illustrated by lantern slides and microscopic sections.

Medical Appointments.

Dr. John Brownlee has been appointed to take charge under the medical officer of health of the Parliamentary-road Fever Hospital, Glasgow. The vacancy was due to the resignation of Dr. F. Dittmar.—The directors have appointed Dr. A. L. Pentland-Smith to be assistant medical superintendent to the Westgreen Asylum, Dundee.—The Edinburgh parish council last week appointed a resident medical officer to the Craiglockhart Workhouse. Three candidates were nominated for the office including a lady. The result of the first vote was that Miss Lillias Thomson, L.R.C.P. & S. Edin., received nine votes, Mr. George J. Jenkins, M.B., C.M., eight, and Mr. J. J. Hewison, M.A., M.B., C.M., five. The second vote resulted in thirteen votes being given to Dr. Jenkins and nine to Miss Thomson.

Ambulance Inspections.

Favourable reports after inspection have been made upon the condition of the ambulance companies of the 3rd Battalion Highland Light Infantry and the 4th (Volunteer) Scottish Rifles. The inspecting officer in each case was Surgeon-Lieutenant Browning, A.M.S.

A Fortunate Village.

Dr. Duncan Love of Cumbernauld, a village with a population of 1000, reports that the village has not had a single case of infectious disease for a period of twelve months.

Casualty Surgeons, Glasgow.

The Police Commission has decided to increase the salary of Dr. Chalmers, casualty surgeon to the Southern District, from £70 to £100 per annum. There is a vacancy in the Western District in consequence of the appointment of Dr. Boyd to be surgeon to the police force.

Aberdeen University.

Twenty-four candidates passed the April medical preliminary examination at the University of Aberdeen.—The University Council has appointed a committee to keep alive an interest in the wants of the university as to new chairs, additional lectureships, and the provision and maintenance of fresh museums and laboratories. Among the "pressing wants" embraced in the recommendations approved of were botanical gardens and residential halls for male and female students.

Hospital Saturday in Aberdeen.

The Aberdeen Town Council has agreed to the request of the committee appointed by the friendly societies by granting the use of Duthie Park on Saturday, June 27th, for a gala. There will be a monster procession through the streets of the city and various sports in the park. The whole proceeds will go to the Royal Infirmary, and given good weather it is expected to raise about £1000.

Corporation Balnearies, Aberdeen Sea Beach—Marine Aquarium.

The new bathing station erected by the town council on the Aberdeen sea-beach, from designs by the city architect and at a cost of between £3000 and £4000, will be opened on May 1st. The building has a frontage of 111 ft., and the external walls are of compressed red brick from Ruabon with white fire-brick facings. The main block, 40 ft. by 35 ft., has open verandahs both on the front facing the Links and that facing the sea, and there is a tower 37 ft. high in each corner, with a water tank in the top of each tower. There is also a central ventilating tower, rising to a height of 44ft. above the ground level. In the basement are the kitchen, laundry, boiler-room, engine-room, pumping apparatus, servants' w.c., &c.; and on the ground floor a large refreshment-room, 35 ft. 9 in. by 17 ft. 6 in., waiting-rooms, the superintendent's room, and the office. Each of the two wings measures 35 ft. by 28 ft. 6 in., and contains eight finely fitted bathrooms, lavatory accommodation, &c. There are four water-supply pipes for each bath—hot sea-water, cold sea-water, hot fresh-water, and cold fresh-water. Behind the old bath-house is an open gymnastic ground fitted with horizontal and parallel bars, vaulting horses, giant strides, &c. In the refreshment room in the former bathing station is to be provided—on the suggestion of Mr. H. Alleyne Nicholson, M.A., M.D. Edin., D.Sc., Professor of Natural History in the University of Aberdeen—a marine aquarium, while in an adjacent room will be a tank for the scientific observation of sea animals during life. The aquarium will be under the scientific direction of Professor Nicholson and assistants. It will be on a small scale at first, the cost being £60, but it is hoped that it will form the nucleus of a valuable marine zoological observatory. All the inside baths, bathing coaches, and bathing arrangements on the sea beach are under the direct management of the municipal corporation.

April 21st.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Health of Dublin.

AT the last meeting of the Public Health Committee on the 15th inst. Sir Charles Cameron reported that during the first fourteen weeks of the present year the death-rate was 7·3 per 1000 below the mean rate for the corresponding period in the previous ten years. During the week ending April 11th, 1896, there were but 12 deaths from zymotic diseases, while in the corresponding week of last year the number was 23. During that week one case of typhus fever was notified under the provisions of the Infectious Diseases Notification Act. It is now quite an unusual thing for even one case of typhus fever to be notified in Dublin or to be received into the Dublin hospitals, where some twelve years ago typhus fever was almost as common in the wards as typhoid fever. At the annual meeting of the supporters of the Adelaide Hospital, on the 15th inst., the medical report, signed by Dr. James Little and Dr. Wallace Beatty, contained the remark, "It is interesting to note that but seldom now do we see typhus, no case of this formidable disease having been admitted to the hospital for years. The disease has ceased to prevail in Dublin." Now this remark applies to practically all the general and even fever hospitals of Dublin, and it is not alone interesting but very satisfactory to note that a disease which was more than once so widely epidemic as to constitute a plague in Ireland has now become so rare that the occurrence of one case in the person of a woman living at the north side of the city has become a notable circumstance.

Automobiles or Horseless Carriages.

On April 16th, at a meeting of the Belfast Natural History and Philosophical Society, Mr. John Brown (the honorary treasurer) gave a most interesting lecture before a crowded house on horseless carriages. The Lord Mayor presided, and a great many members of the medical profession, to whom these methods of locomotion may eventually be of the utmost value, were present. Mr. Brown has for some time given great attention to this subject and during a recent visit to France purchased an automobile, which is said to be the first introduced into Ireland. It is driven by a Serpollet steam motor and was on exhibition in the hall in which the lecture was given. In addition to the carriage itself, Mr. Brown employed to illustrate his lecture a numerous collection of lantern slides showing the history and development of this recent application of mechanical ingenuity. At the end of the lecture, which was received with great enthusiasm, the following resolution was passed: "That this meeting approves of the proposed modification of the Locomotive Acts so as to promote the use of mechanically propelled carriages on public roads, subject to suitable provisions for the safety and convenience of the public." The Lord Mayor, who is one of the partners in the great shipbuilding firm of Harland and Wolff, said it was a matter of extreme regret that while great developments had taken place during recent years in mechanical contrivances for a variety of purposes, in one particular—that of horseless carriages—British skill and enterprise had not only been discouraged, but positively checked and thwarted by an antiquated Act of Parliament that should have been repealed long ago. It is hoped that at the next agricultural show in Belfast, at the end of June, we may have an exhibition of these horseless carriages.

The Abuse of Hospitals.

I understand that the secretary of the Belfast Hospital for Sick Children has sent a letter to the members of the medical profession in Belfast stating that as it has been reported that cases unsuitable for treatment at that hospital from time to time present themselves the medical staff will feel obliged if the name and address of any such cases will be reported to him so as to assist the medical officers in preventing abuse of the charity. The extern department of this hospital has of late increased to a very great extent and there can be no doubt that numbers of patients receive advice and medicine who could quite well pay a small fee to the hardworking medical men of whom there is such a large number in Belfast.

The Proposed New Derry Asylum.

With reference to the proposed erection of a new asylum at Londonderry at a cost of about £20,000, one of the Limavady guardians, at the last meeting of that board, held on April 20th, introduced the subject by stating that if this new building were erected the cost would fall entirely on the agricultural community of the county Derry and would mean an increase in the rates of from 4*d.* to 5*d.* in the pound, which was a very serious matter and of great importance to them all. He said the present Derry Asylum had cost a great deal, and during the last eleven years there had been in all £29,066 expended on it, which amount, repayable in fourteen years,

meant £2652 annually. He suggested that arrangements should be made to reduce pressure on the present asylum by distributing all the harmless lunatics over the different workhouses in the county, and so to obviate the necessity for incurring the enormous expense of building a new asylum. They might easily find room in the Limavady Workhouse for 100 or 150 of the harmless lunatics at present in the Derry Asylum. After some discussion a resolution was passed to the effect that, owing to the existing agricultural distress and the additional expenditure that it would entail in erecting a new asylum, all action in that direction for the present be suspended, and that the Limavady board of guardians offer to give accommodation for 100 to 150 harmless lunatics in their workhouse. It was suggested that other unions in county Derry might join with the Limavady guardians with a view to reduce the present pressure on the Derry Asylum.

Belfast District Lunatic Asylum.

From the sixty-sixth annual report of the resident medical superintendent (Dr. Merrick) of the Belfast Asylum I find that during the year the daily average number resident has been 782, an increase of 59 over that of the preceding year. During the year 240 patients were admitted, the highest number of annual admissions recorded in connexion with the asylum. On Dec. 31st, 1895, there were 698 cases in the asylum, while the normal accommodation is 400; hence the difficulty of proper treatment and classification is apparent. It is curious that melancholia figures largely in the admissions, there being 78 cases suffering from this condition. Of these, 11 had made suicidal attempts and 53 were noted in their admission forms as having suicidal tendencies, thus needing special supervision. Eight cases required forced alimentation due to voluntary abstinence. There has been a larger proportion on the sick list than in previous years. Forty males and fifty females were discharged recovered, and forty cases were sent out improved during the year. There were 44 deaths. The general health of the patients, excepting delicate cases, was most satisfactory, and no case of contagious or infectious disease occurred. Regarding the great overcrowding of the asylum Dr. Merrick urges the completion of even two blocks in the County Antrim Asylum, which would provide accommodation for 200 county patients, and if this were supplemented by the erection of the proposed buildings at Purdysburn to accommodate 300 chronic patients the present overcrowding would not only be relieved, but improved classification of the patients could be adopted, their condition made more comfortable, and better opportunity afforded for improved treatment. The gross expenditure of the asylum for the past year was £18,307 10*s.* 10*d.*, and if £7236 1*s.* 4*d.*, the amount of the Government grant received, and £1043 18*s.* 2*d.*, the amount received from miscellaneous sources, paying patients, farm and garden, &c., be deducted, it will give £10,027 11*s.* 4*d.* as the net amount chargeable to the rates of the district, or £12 16*s.* 5*d.* per head. The net yearly cost per head (including every charge of management) was for the past year £22 1*s.* 6*d.* The inspector of lunatics and commissioner of control (Mr. G. R. O'Farrell), in his memorandum of inspection on Nov. 1st, 1895, says he believes that no public institution in the United Kingdom is at the present time more overcrowded than this asylum; yet he found every department orderly and clean, while its bill of health was favourable and its mortality-rate very low. Certainly, as the inspector says, "With such perilous surroundings, with dormitories so full that there is scarcely space for beds, the resident medical superintendent deserves the greatest credit for his good and careful management of the institution. Dr. Merrick is ably assisted by the assistant medical officer, who shows much energy and practical zeal in the discharge of his duties."

The Mitchelstown Union Hospital: Alleged Ill-treatment of Patients.

About two months ago a trained nurse was appointed to take charge of the Mitchelstown Union Hospital. She had been there only a few weeks when she sent in her resignation and alleged that some of the patients had been beaten by one of the nurses. The guardians held an investigation, and if the statements made by some of the inmates be true a very serious state of affairs must have existed for some time. An old man eighty years of age told the chairman that he had been struck, and that on asking the nurse to allow him to remain in bed she dragged the clothes off him and left him naked. It was also stated that the same nurse had struck another old man when in bed with a poker on the knees and afterwards thrown him down stairs. It was also alleged that she had knocked down a patient and kicked him. The resigning nurse stated she had endeavoured to put an end to such conduct, and as she had found things so generally unpleasant she had finally decided on leaving. Many of the guardians considered they owed a debt of gratitude to the nurse, and a resolution was passed calling on the Local Government Board to hold a sworn investigation with a view to thoroughly sifting the matter.

Triennial Visitation at the Queen's College, Cork.

A triennial visitation will be held at the Queen's College, Cork, to-morrow. It is expected that the Presidents of the Royal Colleges of Physicians and Surgeons will be present and that Mr. Justice O'Brien will preside. A Medical Students' Association has been recently formed at the College, and the association has requested the College council to make certain alterations in connexion with the medical school. It is stated that some of the requests have been granted and others are still under consideration, but with the impetuosity characteristic of youth the students think that their views should have been adopted by the council at once, and accordingly they intend applying to the visitors, who form a court of appeal, to issue a direction to the council with regard to any of the requests which have not been acceded to. The students have engaged the services of a solicitor, and in medical circles the proceedings are looked forward to with interest.

April 21st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Castration in Egypt.

M. LORTET recently exhibited before the Société de Médecine of Lyons the skeleton of a eunuch of Cairo, which skeleton measured 1 metre 96 centimetres. The thorax appears very short as compared with the exceptional length of the legs. This phenomenon is quite in accordance with what is met with in the lower animals. Thus, while the wings of a capon are no more highly developed than those of a cock, the long legs impart to the emasculated fowl a peculiar appearance. This same lengthening of the hind limbs in the ox corrects the sloping of the back-line which is so characteristic of the bull. M. Lortet furnished some interesting if not very savoury details concerning the operation of castration as currently practised on Egyptian boys from seven to ten years old. One method consists of the amputation of the penis and scrotum close to the pubis by one sweep of a razor. The poor child is then plunged up to the neck in fine dry sand, the compression thus brought to bear on the wound contributing to arrest the hæmorrhage. At the end of four or five days the patient is removed from his sand-bed and the wound is dressed with rags soaked in oil. Another method employed is the application around the spermatic cord and the penis of a very fine, strong ligature tightly tied. The sufferings of the unfortunate victim can easily be imagined, but hæmorrhage is less to be feared than by the cutting method. The subsequent burying in sand is in this case dispensed with, the only dressing applied being the bark of acacia rich in tannin. But whichever of the two barbarous proceedings be adopted it is said that two-thirds of the children succumb. The suppression of such a cruel practice will in time constitute one of the numerous blessings accruing to this ancient race from the British occupation of the country.

The Sero-therapic Treatment of Puerperal Fever.

Readers of THE LANCET will probably remember that on Feb. 23rd, 1895, M. Marmorek communicated to the Société de Biologie his discovery of an antistreptococcic serum, and that on the same occasion M. Roger and M. Charrin made a similar communication, besides reporting a case of puerperal fever said to have been cured by their serum. M. Roger afterwards reported a second successful case, and later still the cure of a case of erysipelas of the new-born and of a case of streptococcic tonsillitis by injection of his serum. Then M. Marmorek announced the successful treatment by his serum of 45 adult cases of erysipelas. M Charpentier[1] has collected 40 cases

[1] Société Obstétricale de France, April 10th.

of puerperal septicæmia treated by serum in the different maternity departments of Paris hospitals and in private practice. The results were 22 recoveries and 17 deaths, or a mortality of 42·5 per cent. Deducting 5 cases treated *in extremis* and 1 where the result was vitiated there still remains a death-rate of 35·29 per cent. Bacteriological examination was conducted in 25 instances, the streptococcus being discovered in 16 cases (9 recoveries and 7 deaths), and the streptococcus associated with the staphylococcus or the bacterium coli in the remaining 9 cases (4 deaths and 5 recoveries). The dose of serum injected varied within wide limits. In no instance was the serum treatment trusted to exclusively, intra-uterine medication being also employed. Urticaria, erythema, pruritus, and divers symptoms of a nervous order were frequently noted as the result of the injections. M. Gaulard of Lille attributes one death in his practice to the serum. M. Budin is inclined to deny the utility of the method, and M. Charpentier states that the high hopes inspired by the discovery have not been fulfilled. M. Bar and M. Tissier have treated 19 cases with Marmorek's serum with 10 deaths and 9 recoveries. Eliminating 3 cases where the treatment was instituted *in extremis* and 3 in which no bacteriological examination was made, there remain 13 well-studied cases with 6 deaths. In 6 cases treated by serum prepared by M. Roger and M. Charrin, and eliminating 1 case not examined bacteriologically, 4 out of 5 died. Four cases of erysipelas in the new-born died in spite of the employment of the serum. The serum appears to be too weak to neutralise the toxines in cases of general infection, although in ordinary cases of adult erysipelas it is efficacious. M. Bar thinks that the injections are commenced too late in puerperal cases. The strange recommendation of M. Marmorek to refrain from all intra-uterine medication has been discarded by all practical gynæcologists. M. Bar has never seen albuminuria occasioned by the serum, but other symptoms more or less grave have been noticed. Once an abscess formed and, strange to say, large numbers of streptococci were discovered in the pus. A woman treated at St. Louis Hospital received about 100 c.c. of serum in twenty days. Four days after the last injection the temperature diminished gradually, and debility finally induced a fatal result. It is evident that once puerperal fever has made any progress we cannot count upon the serum any more than we can upon other better-known methods of treatment. M. Charpentier wound up the discussion by remarking that when intra-uterine treatment was applied at the very commencement a good result invariably followed. All this is disappointing, but it only means that the serum, if it is to justify the expectations promised by its discoverers, must be made more active and safer to manage. It may, after all, be *the* remedy of the future.

April 21st.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Alleged Fatal Injection of Diphtheria Antitoxin.

A GREAT sensation has been caused by the recent announcement in the births, marriages, and deaths columns of the principal Berlin newspapers that a child, one and a half years of age, had died "from inoculation of diphtheria antitoxin"; the same subject was moreover continued on the following day by an intimation of the burial of the "poisoned" child. As the father, who had inserted these paragraphs, was a very well known medical man, Professor Langerhans, prosector to the Moabit Hospital and a former assistant to Professor Virchow, the public naturally became alarmed, and the lay press discussed the matter in detailed articles, of course before any particulars were known. By order of the legal authorities a post-mortem examination of the body was made by two medical officers attached to the law courts, but the cause of the death could not be clearly defined. As already mentioned in your columns,[1] the serum was seized by the authorities, but I learn that it was ascertained to be of normal quality and that it had been already used for other patients without any accident. It is now stated that the injection was made for prophylactic reasons because a servant of Professor Langerhans had been attacked with alleged diphtheria and admitted to the Moabit Hospital. The injection was performed by the father himself, and the child died from asphyxia three minutes afterwards. It is, of course, quite impossible to attribute this sudden death to the serum, as hardly any poison except hydrocyanic acid can destroy life so promptly. The complications hitherto described as resulting from antitoxin have always happened long after the injection, and no permanent ill-effect from it has hitherto been recorded. The abdomen is stated to have been the site of the injection, and very probably death was due either to entry of air into a vein or to thrombosis. The whole proceeding was subsequently proved to have been quite unnecessary as the servant's illness was found at the hospital to be simple tonsillitis and not diphtheria. Professor Eulenburg, the editor of the *Deutsche Medicinische Wochenschrift*, has given his opinion in most energetic terms both in his own journal and in a widely read non-medical weekly paper. The medical profession is unanimous in blaming Professor Langenhans's course of action, which can only be explained on the ground of his mental anguish.

[1] THE LANCET, April 18th, p. 1081.

Medical Courts of Honour in Prussia.

In THE LANCET of June 1st, 1895 (p. 1404), an account was given of a Bill brought before the Saxon Parliament relating to ethical misdemeanours committed by medical men. Prussia, the greatest of the German States, now has a Bill very like that of Saxony, but much more stringent. Its principal feature is that every provincial medical board shall elect four of its members who, together with a learned judge, will form the "court of honour." They will inquire into alleged contraventions of medical ethics and will also act as mediators in disputes between medical men. A Government lawyer will act as public prosecutor, whilst the defendant is entitled to be legally represented. The court of honour is invested with the same privileges as an ordinary law court; it may, for instance, compel the attendance of witnesses, but the proceedings are not public, only the members of the medical board being entitled to be present. The penalties are either simple warning, reprimand, or a fine not exceeding 3000 marks (£150). A court of appeal is, moreover, to be instituted in Berlin, consisting of the director of the medical department of the Home Office as president, three other members of this department appointed by the Crown, and three representatives of the medical boards elected by its members. The subject of ethical misdemeanours has for long been an anxiously discussed question at medical gatherings, but nothing was done, as the Government refused to allow the courts to have jurisdiction over the medical officers of the army and civil service. The invidious exemption of these medical officers, which is maintained in the new Bill, together with the introduction of the official element in the shape of the public prosecutor and the court of appeal, is looked upon with distrust, and it is the opinion here that medical men should be entitled to settle questions of etiquette and ethical misdemeanours among themselves without the intervention of Government officials. Some of the sections of the Bill will possibly be altered by Parliament, but the principal points, especially the exemption of the medical officers of the services, will certainly become law.

The late Dr. Baum.

Dr. William Baum, chief surgeon to the General Hospital in Dantzic, Western Prussia, died in that town on April 13th. As a military surgeon he took part in the wars of 1864, 1866, and 1870-71, and on the conclusion of his military service, in which he distinguished himself by his great ability, he was elected surgeon to the Dantzic Hospital. He not only conducted a very extensive practice, but wrote on many subjects, including ovariotomy, cancer of the uterus, resection of the nerves, emphysema, &c. He was universally esteemed by his fellow-citizens and the profession.

April 21st.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Kassala and the Rumoured Prevalence of Malaria.

ONE must take with a good many grains of salt the "intelligence" that appears from French sources as to the Anglo-Egyptian, and more especially the Italian, movements in the Soudan or in Abyssinia. According to the *Italie*—French in language and aspiration though published here—

Kassala is a centre of malarial infection and the Italian soldiers which garrison it are attacked with the fever at the rate of 500 a week. In these circumstances the Dervishes have only to wait a little and their malarial auxiliary will do for them what their siege operations have hitherto failed to accomplish—effect an evacuation of the stronghold. Information, however, from the commandant of the Italian force quartered at Kassala, communicated on the eve of the battle of Abba Carima and since then confirmed, gives a totally different account. The hygienic conditions of the garrison differ in no respect—certainly not for the worse—from those prevailing at other centres of the Colonia Eritrea. I may add that its defensive resources are still unimpaired, which cannot be said of the offensive power of the enemy.

Dr. Baccelli's Return to the Chair of Clinical Medicine.

The ex-Minister of Public Instruction resumed his professional duties on the 13th inst. in the clinical amphitheatre of the Santo Spirito Hospital before a brilliant audience. Besides the 500 students for whom it is seated the amphitheatre contained many physicians and consultants of the city and province, to say nothing of distinguished medical visitors, mostly German, on their way through Rome. Dr. Baccelli always shines on these occasions, and his ἔπεα πτερόεντα (winged words) found their way to every heart as he described his two years' Odyssey on the troubled waters of political life and his finding himself once more in the academic Ithaca of former and better days. Passing in review the advances made by medicine since their last meeting, he once more warned his young hearers not to be seduced by scientific research, however fascinating, from their proper place at the bedside, where alone the "diagnostic eye" and the "tactus eruditus" can be trained, till disease surrenders itself unconditionally to the physician who can read its "expression," run it down through all its protean shapes and compel it almost to suggest its proper treatment and cure. Not that he depreciated the knowledge and the mental discipline gained in the *palæstra* of the laboratory. Far from it. "La medicina è un' arte che deve essere illuminata dalla scienza" (medicine is an art which ought to be lighted up by science), but an art it will always remain, and its most successful practitioner an "artist" in the highest and most ideal sense of the word. From this he passed to the evil which seems to beset practice at the present moment—the "polifarmacia" (the excess of reliance on "remedies"), which has usurped the place of the equally objectionable "nihilismo" ("do nothing" system). Having illustrated the evils of both and vindicated the *via media* of an enlightened caution, he proceeded to the clinical business of the day—the diagnosis and treatment of abdominal abscess, particularly when affecting the parietes. At the close the repeated rounds of applause evoked from him a few supplementary words, not less felicitous than those of the preamble, on the conduct of pupils of the Roman school in recent hours of danger and death on the stricken field, conduct worthy of the best days of the Mistress of the World.

April 18th.

Obituary.

MARIANO SEMMOLA.

THE profession in Italy, and, indeed, throughout the world, has lost an able and exemplary investigator, teacher, and consultant in the Professor of Clinical Medicine in the Neapolitan School. Mariano Semmola is no more. He died in Naples on the 5th inst. of a second apoplectic seizure, the first having overtaken him on March 8th. From this he had made a partial recovery. The intellect continued intact, the hemiparesis confined to the right arm had disappeared, but the aphasia was persistent. On the 29th ult. the hemiparesis recurred, involving half the right side and the bladder; but all the skill of his colleagues failed to alleviate the symptoms. He steadily grew worse, though the mental faculties remained clear and the spirits serene to the end, which supervened, as stated, on the early morning of the 5th. He came of a medical family, and particularly in his illustrious father, Giovanni Semmola, he had an ideal of what the hard-working, sagacious physician can do. There was no branch of the healing art in which the elder Semmola did not leave a memorable impress, and his son proved what he aspired to be, a worthy professional heir. Born at Naples on Jan. 31st, 1831, he passed through a brilliant curriculum, literary, philosophic, and medical, under teachers like Guarini, Gasparrini, Tenore, and Palmieri, distinguishing himself in the weekly *résumés* of work when student was pitted against student in competitive exposition, and impressing his clinical chiefs with his powers of getting at "the root of the matter." When twenty years old he presented to the Accademia di Medicina di Napoli three papers on Bright's Disease and Albuminuria, and brought out in a striking manner the great influence of the azotized and non-azotized regimen on the quantity of albumin eliminated by the kidney in the twenty-four hours by sufferers from morbus Brightii. Proceeding to Paris he plunged into steady work, experimental and clinical, under Rager, Trousseau, and Bernard, and earned the plaudits of a distinguished auditory at the Institut for a monograph on Pathological Glycogenesis. On his return to Italy he resumed, with increased knowledge and unabated ardour, his studies in albuminuria, a subject with which, from 1861 to 1893, his name has been identified by numerous papers read before scientific bodies and medical congresses, national and international. In 1883 he had so favourably impressed the Paris school by what he had contributed to the pathology and therapeutics of the subject that at its instance the French Government decorated him with the "Legion of Honour" and the Académie de Médecine elected him corresponding member. Controversy was not spared him in this arduous field of research, and his findings were contested by Senator of Berlin and Labadie-Lagrave of Paris, but not without ample recognition on their part of the independence and sagacity of his work. His ambition was to revive the mediæval pre-eminence of Italian medicine, and with that view he founded the Archivio Medico Italiano, in which all research and observation, clinical and therapeutic, was welcome on the one condition that it was national in its authorship and independent in its tenour. In 1869 he gave to the world his "Terapia Empirica e Terapia Scientifica," and in 1877 his "Medicina Vecchia e Medicina Nuova," the latter so bright and attractive a piece of exposition that it was speedily translated into most European languages, including English, German, French, Portuguese, and Greek, while as late as 1891 his permission was asked and given for his coöperation in rendering it into Russian. In 1890 appeared at Berlin the German translation of his "Prolegomeni di Farmacologia e di Terapia Clinica," preceded by a brilliant preface from the pen of Professor Nothnagel of Vienna. His was one of the few sceptical voices that broke the outburst of enthusiasm with which Koch's experiments on the bacillus of tubercle and its counteracting lymph were hailed, his attitude towards sero-therapy as a whole being one of approval, vigilant indeed and cautious.

Academic employment came to him early and in abundance. In 1865 we find him in the chair of Pharmacology and Therapeutics in the University of Naples, to which he attracted crowds of students; and in 1866, at the instance of Baron Ricasoli, then Minister of the Interior, he took part in the Royal Commission charged with the new Codice Sanitario Italiano, in which his coadjutors were Cannizzaro, Bô, and Burci. In 1874, on the invitation of the Italian Government, he represented Italy at Vienna in the International Sanitary Conference convened to revise the recommendations of the previous conference held at Constantinople, and to formulate measures of international application for the averting of cholera and other Eastern epidemics. His participation in the discussions was marked by such knowledge, discrimination, and expository power that his speeches were reproduced *in extenso* by the leading scientific journals, and the further honour was conferred on him of knightly decorations at the hands of foreign Powers, including Russia, the Czar *proprio motu* and with an autograph letter bestowing on him the badge of Grand Officer of S. Stanislaus. On his return from Vienna he was nominated Member of the Consiglio Superiore di Sanità of the Italian kingdom and afterwards he became President of the Croce Bianca, in which capacity his exertions during the great cholera epidemic in Naples were second only to those of the King, by whose side he worked night and day. For this service he received the gold medal of Valore Civile. He represented Italy at the International Medical Congress held at Brussels (1875), Amsterdam (1879), London (1881), Copenhagen (1884), Rome (1885), Washington (1887),

and Berlin (1890). In 1883 the then Minister of Public Instruction, Signor Coppino, founded the chair of Clinical Therapeutics, of which he became Professor, and in 1888 his lectures so impressed Don Pedro, the Emperor of Brazil, then a casual auditor, that when his Imperial Majesty fell ill the same year at Milan he would have no other consultant than Dr. Semmola, who remained in attendance for two months. In one of the graver crises of that memorable illness Dr. Charcot was summoned by telegraph from Paris, but on examining the illustrious patient and finding what had been done he declared that his presence was not required, every available means having been adopted by Semmola, whom he congratulated on the skill and success of his treatment. The Emperor, re-established in health, showed his gratitude not only by one of the handsomest *honoraria* on record, but by conferring on the Neapolitan physician the Grand Cordon of the Imperial Order of the Rose, while the municipality of Rio de Janeiro presented him with a gold medal specially struck for the occasion and also with an address of congratulation. In 1890 he was called in consultation at Constantinople by the ex-Khedive of Egypt, his Imperial Highness Ismail, remaining in attendance three weeks, during which he availed himself of his presence in the Turkish capital to deliver before its Academy of Medicine a memorable discourse on Albuminuria and Nephritis. This he followed up at the "Syllogos Litterarius" of Constantinople by a lecture on the Physiological Cure of Diseases, in consideration of which the Sultan decorated him with the Grand Cordon of the Osmanlie.

In Parliament he represented Caserta in the Liberal interest, and was always heard with equal interest and profit on questions of public health and public instruction. In 1886 he was nominated Senator of the kingdom. With all this professional and public activity he was a prolific writer, his publications (to say nothing of contributions to medical periodicals) including treatises on Diabetes Mellitus, on the Calabar Bean, on Addison's Disease, on Gastropathia Nervosa, on Cardiac Neuropathy, on Iodoform and its Uses, on "Saturnismo Cronico," and on Hydatid Cysts of the Liver. In THE LANCET of Sept. 14th 1895, appeared his paper on "The Antisudorific Properties of Picrotoxine." His funeral, on the 6th, was a public one, the chief commercial houses in Naples suspending business for the occasion, and a vast multitude of mourners, including every class of society, accompanying him to the grave. *Oraisons funèbres*, eloquent and touching in their tenour, were delivered by his surviving colleagues, among whom may be mentioned Professor Armanni, Professor Vizioli, and Dr. Renzi, while Dr. Ferrara, Dr. Matoni, and the Senator Dr. Martini spoke for the profession and the Legislature with equal power and effect. Telegrams of condolence with his family continued to arrive from all parts of Italy and from most of the European capitals, unanimous in deploring the loss of one of the greatest of Italian physicians and teachers, whose professional enthusiasm was hardly more conspicuous than his sense of public duty and his exemplary virtues as a citizen.

JOHN GASON, B.A. DUB., F.R.C.P., L.R.C.S. & L.M. IREL.

FOR more than fifty years this active and philanthropic practitioner divided his professional year between Rome and the Baqui di Lucca, practising in the Italian capital during the winter and spring and in the Tuscan health resort during the summer and autumn. Born in the county Wicklow he proceeded, at the early age usual in Ireland, to Trinity College, Dublin, where he completed his education in arts by graduating B.A. in 1836. He thereafter enrolled as a student of medicine in the Dublin school, took the Licentiateship in surgery and midwifery at the Royal College in 1839, and five years later the analogous qualification at the Royal College of Physicians, of which in 1863 he became Fellow. In 1845 he repaired to Rome and in the Anglo-American colony there continued to practise till well past his eightieth year, not only attending to his private *clientèle*, but interesting himself in the medical charities under British support. Among these he was consulting physician to the Anglo-Italian Protestant Dispensary and medical director of the Protestant Hospital, both of which institutions owed much to him, not merely for professional attendance unremittingly bestowed, but also for effective support, pecuniary and other. The British Relief Fund also could invariably count on his coöperation, medical and philanthropic; while among other services to the English-speaking colony he was mainly instrumental in erecting Trinity Church in the Piazza di San Silvestro—the first place of worship for members of the Church of England opened within the city walls. As the dean of the English-speaking practitioners and consultants in Rome he had many opportunities of showing kindness and hospitality to professional brethren from Great Britain, America, and the colonies—opportunities by which many profited, particularly during the Cholera Conference of 1885 and the Eleventh International Congress of Medicine and Surgery in 1894. Up to within the present year he continued in his customary vigorous health, till within the last few days he succumbed to an apoplectic seizure. He was interred on the 17th inst., by his special desire, at the Baqui di Lucca, where, no less than in Rome, he has left the English-speaking public indebted to him for kindly and valuable services extending over half a century.

WILLIAM SQUARE, F.R.C.S. ENG., L.R.C.P. LOND., L.S.A.

THE death is announced of Mr. William Square, whose name for many years has been prominently identified with the medical profession at Plymouth, Devon. He died on Saturday, April 18th, after an extremely short illness. He was educated at Rugby and the Baptist College, Regent's-park, London, and matriculated when he was sixteen years of age at the University of London. He commenced his medical studies at the South Devon and East Cornwall Hospital and continued them at St. Bartholomew's Hospital, where he took several prizes and was senior scholar for the year 1866. He became M.R.C.S., L.S.A. in the same year, L.R.C.P. in the following year, and F.R.C.S. in 1871. He was elected a Fellow of the Royal Geographical Society on the nomination of Sir Leopold McClintock and General O'Connor. For a number of years, and up to the time of his death, he held the position of surgeon to the South Devon and East Cornwall Hospital, having been appointed to that position on the retirement of his father. He was also senior surgeon to the Plymouth Royal Eye Infirmary. Last year he filled the presidential chair of the Plymouth Medical Society, one of the oldest societies of its kind in the kingdom, it having been established in 1794. For twenty-five years he was honorary surgeon to the Plymouth Fire Brigade. The deceased gentleman was a great traveller, one of his latest expeditions being to the Pyramids of Egypt. He was gifted with an extraordinary memory and was a genial companion and a versatile conversationalist. Although a very good *raconteur* he never told a story against anyone or uttered an ill-natured expression. He was an ardent sportsman, and claimed to have taken part in the first swimming match in Plymouth, whilst as a fisherman, and more recently as a cyclist, his imprudent disregard for the safety of his own health proved a constant source of anxiety to his friends. To give pleasure to others was his greatest delight, and for this he would sing a song, tell a tale, work up a lecture and spare neither time nor money in arranging some theatrical performance or in arousing interest in some philanthropic movement. He was an enthusiastic horticulturist. Mr. Square, who was for a short time a Plymouth town councillor, was only fifty-two years of age, and his untimely death will be greatly mourned.

EDWARD DAY McNICOLL, F.R.C.S. EDIN., L.R.C.P. EDIN.

A FEW months ago Mr. McNicoll was apparently in perfect health. He was then attacked by pain, at first put down to sciatica, which kept him to bed for a short time; but he was soon again visiting his patients. Before long, however, it was evident that something more serious existed and he was found to be suffering from sarcoma. His painful and hopeless illness was borne with cheerful fortitude and a marvellous patience, and all that skill and kindness could suggest was done by medical friends to relieve his sufferings until his death, on the 14th inst., at the age of fifty-one. He was born in 1844, and was the second son of the late D. H. McNicoll, M.D., of Southport, who was a man of considerable and varied attainments. It was at first intended that Edward McNicoll should be an engineer, but towards the close of his apprenticeship to a firm at St. Helens he decided to follow his father's profession. In

1873 he became L.R.C.P. Edin., and some years later the Fellowship of the College of Surgeons, Edinburgh, was conferred upon him. He practised for twenty-three years in Southport and for some years was in partnership with Sir George Pilkington, now retired from practice. He had a large general practice, was an honorary medical officer of the Southport Infirmary, which benefited much from his untiring exertions on its behalf, and at one time was resident medical officer to the Southport Convalescent Hospital. He was always a kind friend to the poor, and the extent of his benefactions will never be known. His busy life allowed little time for literary work, but he was an occasional contributor to the medical journals, and some years ago edited a new edition of his father's "Handbook to Southport," which contained valuable information as to the fauna and flora of the districts. Mr. McNicoll never married, but leaves an aged mother and two unmarried sisters in the home of which he was the brightness and the stay. His death is much mourned in Southport, where he was universally esteemed, and indeed beloved, for his was a singularly winning nature, and no one could see his open ruddy face, with its genial expression, without feeling that he was in the presence of a kindly, unselfish, and honest man. His medical brethren in large numbers and a great concourse assembled round his grave. Mr. Wm. Heath, Dr. Baines, and Dr. Baildon were unwearied in their attention to their friend, and he was seen also by Mr. Banks and Mr. Paul of Liverpool and Dr. Bill of Edinburgh, who could only endorse the unfavourable prognosis already given.

ALFRED GEORGE ROPER, F.R.C.S. ENG.

ALFRED GEORGE ROPER of Croydon passed away at Croydon at the age of seventy-seven years, on April 13th. He was educated at Guy's Hospital and obtained his M.R.C.S. and L.S.A. in 1840, and became a F.R.C.S. in 1875. For forty years he was in practice in Croydon, and was held in high esteem by all his fellow practitioners. For thirty-one years he was surgeon to the Croydon Infirmary and did much towards the arrangement of the present infirmary, receiving a suitable acknowledgment from the guardians for his valuable services. In 1867 he promoted the Croydon General Hospital, and acted as its senior surgeon and honorary secretary for some years, and in 1875 received a handsome public testimonial in appreciation of his honorary services to this institution which through his energies has become what it is. He leaves a daughter and three sons, one of whom is in the medical profession.

CHARLES HIGHETT, M.R.C.P. EDIN., L.S.A.

MR. CHARLES HIGHETT, M.R.C.P. Edin., L.S.A., died at his residence, Field House, Montpelier, Bristol, on April 20th, aged eighty-four years, having been for some time in a delicate state of health. Mr. Highett was educated at the Bristol and Middlesex Hospital Medical Schools, and took the L.S.A. in 1840, the L.R.C.P. Edin. in 1860, and the M.R.C.P. Edin. in 1865. He was descended from an old Huguenot family, and married the eldest daughter of the late Dr. Spencer, ex-Mayor of Wells, who died many years ago. Mr. Highett settled as a medical practitioner in Bristol fifty-four years ago, but did not remain long in active practice. It was not until comparatively late in life that he took a prominent part in municipal matters. In 1881 he obtained a seat for the district ward, and attended regularly to Council work, being an active member of the Sanitary Committee and also of the Finance and Library Committees. He was elected Mayor in 1891 and most efficiently discharged the duties of this office. During his mayoralty Mr. Highett was elected to a vacancy on the aldermanic bench. He was an earnest Churchman, of a kindly and courteous disposition, and a good friend to the poor. His fellow citizens held him in the highest esteem and much regret his death.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Constantin Paul, *Professeur Agrégé* of Therapeutics and Member of the Paris Academy of Medicine. He was President of the Therapeutical Society and an accomplished clinical physician. His works, which are numerous, are largely devoted to the subject of the effect of treatment on cardiac disease.—Dr. Pietro Gamberini, Emeritus Professor of Dermatology and Syphilis in the University of Bologna.—Dr. Ramakers, Assistant Professor of Anatomy and Physiology in the Algiers Medical School.—Dr. Luton, Professor of Clinical Medicine in the Rheims Medical School.

THE

INTERCOLONIAL MEDICAL CONGRESS OF AUSTRALASIA, 1896.

FOURTH SESSION.

(FROM OUR SPECIAL CORRESPONDENT.)

(*Continued from page 1107.*)

THE SECTIONS.

PUBLIC HEALTH.

PRESIDENT'S ADDRESS.

THE presidential address in this section was delivered by Mr. SPRINGTHORPE, and he took for his subject a Physician's View of the Battle of Life. The battle itself, he said, has to be waged man against man, man against other forms of life, and man against himself. The domain of the strife of man with man was well recognised and there was no escape from the law of the struggle for existence. Spinoza reminds us, he continued, that the big fish were created to swallow the little fish, and the incessant border warfare of savage tribes shows how well man fulfils his destiny. The civilised man follows the same law, though in different manner. Society, to quote again from Spinoza, is simply an organisation of the little fishes to protect themselves, and the strife continues between individuals, classes, and races. Against such natural law the decrees of statecraft and the educated selfishness of coöperation are but partial and temporary expedients, and, fortunately perhaps, the physician is called in simply to help the fighter to fight better; whilst in the "battle of the clubs"—the struggle for practice—he himself experiences its keenness. Will competition, then, never be restrained except by self-interest? Not, perhaps, from the material and vital sides, but surely by the development and spread of those higher considerations which some think are foreign to those lower relationships and depend entirely upon man's peculiar moral endowment. Man's conflict with other forms of life, however, is a subject more pertinent to the physician. As we have seen, the great law of the struggle for existence rules not only individuals but species, genera, classes, and kingdoms. For his sport, use, or food man preys upon the lower animals, and wherever practicable the latter returns the compliment. In parasiticism we find an even closer interdependence and strife, each harbouring at its own risk certain organisms which may affect the other; they may be air, food, or drink. It would surprise many who have not carefully studied the question to find how numerous and important are the diseases thus produced and how large the number of human beings thus affected. For the present, putting on one side the question of germ diseases, man acts as the host of eight protozoa, fifty-one helminths, and twenty-one arthropods. There are reasons, more or less strong, for associating cancer with protozoic invasion. The common round worm, the guinea worm, the ankylostoma, and the megastoma are all found in the intestines of other animals as well as man and are undoubtedly interchanged from one to the other. In the different tapeworms—the beef tapeworm, the pork tapeworm, and the hydatid—we have alterations of form and effect with the difference of habitat, the mature forms inhabiting the intestine and the larval condition being assumed in the internal organs. The trichina again, which is the real cause of many epidemics variously described as poisoning, rheumatics, typhoid fever, typhus fever, and formerly as black death and English sweat, exists in man in both developed and undeveloped states, whilst the hog is its peculiar and original host. The disease thus produced is both extensive in amount and varied in manifestation, and though some of the forms at least are well recognised there is often need of special inquiry as to their possible presence in all obscure cases of nervous or intestinal disorder attended with anæmia and emaciation.

Not unnaturally, perhaps, it has become too much the custom to regard all microbes as injurious, forgetful of the fact that there is another side to these activities, as is exemplified in their being Nature's scavengers and earth's fertilisers, bakers of man's bread, brewers of his beer, makers of his vinegar, and flavourers of his wine, butter, and cheese; indeed, without the presence of friendly germs in his intestinal flora his food would not be peptonised and in the midst of plenty he would starve. Another common error is the supposition that the invasion of the germ necessitates the production of the disease. This is no doubt true in certain cases, such as anthrax and certain pyococci, but it is generally the constitutional state rather than the presence of the germ which determines the extent of infection, the issue of the fight; hence, while doing all that is possible to prevent invasion, and even attempting to kill the germ so far as is possible without injuring the combatant tissues, it is still more important to fortify the outposts by promoting the healthy condition of the mucous membranes and bathing them in healthy secretions, and to build up the natural resisting power of the organism as a whole. And as the resisting power varies so also does the virulence of the germ, both towards aggravation and towards attenuation. Nor is the struggle simply between man and germ; it rages equally between germ and germ, and mixed infection is by no means uncommon. As Dr. Lauder Brunton graphically reminds us: "Even amongst these minute organisms the struggle for existence and the survival of the fittest exists. When two microbes are growing together one may choke or destroy the other, just as weeds in a garden may choke the flowers. On the other hand, successive generations of the microbe may render the soil unsuitable for another, just as decaying algæ and mosses may furnish mould in which higher plants can grow. The struggle takes place also between the disease germs and the cells of the organism which they have invaded. This has been beautifully shown by Metchnikoff in the Daphne, where the process of the cells eating up the microbes or the microbes destroying the cells can be actually observed under the microscope. It is impossible to see one part of a microbe half digested whilst the part outside remains unaltered without believing that the process of phagocytosis is one of great importance. At the same time it bears about the same relationship to the total struggle that a bayonet charge bears to a modern battle. The main part of the fight is really carried on at some distance by deadly weapons, by bullets in the case of the soldier and by ferments, poisonous albumoses, and alkaloids on the part of cells and microbes." Even this description by a master hand is not altogether complete. It says nothing of the immunity that may be artificially built up for a limited period by various manipulations of the germs themselves and of the antitoxins which the system throws out in its hour of peril, which, strength for strength, are the exact chemical antidotes to the toxines, and the recent application of which in various disorders has been the crowning therapeutic triumph of the century. We are thus prepared for the perhaps surprising fact that it takes two factors—germ and susceptible organism—to produce the disease, and that the germ alone may be present in mucous membranes, tissues, air, food, or drink without any necessary appearance of the disease. On the contrary, there cannot be the disease in the absence of the germ. The list of diseases thus produced is a long and weighty one. The bacteriologist is thus an essential assistant to the physician, and the help of the skilled veterinary surgeon cannot be overlooked without serious danger to the public health. Is there, then, any prospect of the sanitary millennium, when infectious disease shall be no more? We must first have dealt satisfactorily with all disease germs without; we must be able to control entrances and exits; or we must have become able to confer racial immunity. Then, and not till then, will the plague be stayed. Ignorance is without doubt the mother of an untold amount of preventable disease. Such portions, therefore, of the sanitary domain as are matters of individual action should be made matters of primary education and be included in the curriculum of study by every boy and girl. How much longer shall such be taught the heights of mountains of no importance to them and parts of speech that are dead, but unfortunately not buried, and yet be left ignorant of the importance of heredity, the requirements of sound development, the dangers to health and how to avoid them and similar every-day health factors? In addition, the creation of a sanitary atmosphere that will surround individuals and permeate households is a matter of scarcely less importance. To this end the initiation and combined activity of such bodies of earnest and trained sanitarians as constitute health societies, the St. John Ambulance Association, sanitary associations, and the like, become hygienic duties and privileges. With the spread of sanitary knowledge there is needed also a widening of the sphere of the physician's influence, for extended professional performance must accompany the broadening of public conception. The physician's usefulness must necessarily extend far beyond the remedial treatment of the sick. It will be more and more recognised that he is the trained servant of nature, able to do more preventatively than curatively, and more valuable by his advice than his drugs. Dealing with State sanitary control, he continued: "And since *Salus populi suprema lex*, it is not too much to say that the State which neglects to deal officially with these matters fails to perform one of its fundamental protective duties. To my mind the proper attitude to take up was well exemplified at the International Sanitary Exhibition just closed at Paris. In proposing the health of the President of the Republic the Dean of the Faculty of Medicine referred to faulty sanitation as a public danger and urged the passing of a Public Health Act. The President of the Cabinet Council, in reply held that it was the duty of the State to say to sanitarians, 'Show us what to do and we will do it.' And as an instance of a great community now prepared to act upon such expert advice I can refer you to the proposed sanitary reforms in India which seemed destined to create a new era in sanitation in that vast and densely populated peninsula. Enough has been said to show that the part that may be taken by our profession in the extension of knowledge, the creation of a sanitary atmosphere, the imparting of specific advice and administrative or scientific work, is a noble and inspiring one. And amidst all the drawbacks and disappointments which at times press so heavily upon us it is more than probable that, with Sir James Paget, we can claim for our calling from amongst all the sciences 'the most complete and constant union of those three qualities which have the greatest charm for pure and active minds—novelty, utility, and charity'; and that we can compete with the world, not where wealth is the highest evidence of success, but 'in the nobler ambition of being counted among the learned and the good, who strive to make the future better and happier than the past.' Thus it is granted us by 'our labours to promote the gradual approach of that sanitary millennium when heredity shall be counterbalanced, development progress harmoniously, external attack cease from troubling, and internal disquiet be at rest, until, in the fulness of time, there shall be left only that last enemy whose name is death. Then, were man only the perfection of the vital, the coping stone of the material, naught, 'tis true, would remain but the redistribution of atoms, the reincarnation of the vital, and the oblivion of personality. But such negation neither scientific leader nor scientific laureate finds himself compelled to accept. On Huxley's tomb is deeply graven the trust that survives a true agnosticism, and from Tennyson's grave still breathes the century's crowning message of hope and faith."

Mr. MASON (Otaki) introduced a discussion on Rural Hygiene, and Mr. A. G. KIDSTON-HUNTER read a paper on an Examination of Potable Water from Bacteriological and Chemical Points of View.

The Contagious Diseases Act.

This was the first subject taken in the Section, the memorial from the Women's Christian Temperance Union of Victoria having been referred to the Section with a view to discussion.

On the motion of Dr. KNAGGS (Sydney) the following resolution was carried unanimously: "That the question of the Contagious Diseases Act be referred to the next congress for discussion."

The PRESIDENT intimated that it was proposed to ask Mr. Grace to introduce the subject of the Contagious Diseases Act, and the section could then deal with it in some shape or form. His own opinion was that they would not be able to agree on the subject.

Mr. H. A. DE LAUTOUR (Oamaru) contributed papers on the Distinction between the Appearance of Razors, &c., in cases of Homicide and Suicide, and on a Simple Method of fixing and preserving Imprints of Foot or Finger-marks.

The Public Health Aspect of Alcohol.

Dr. CHAPPLE (Wellington) read a paper on the Public

Health Aspect of Alcohol. It was, he said, no part of the duty of medical men or medical societies as such to deal with the various ways suggested by social reformers and politicians of dealing with the liquor traffic. For the sake of their honour as a profession, however, and for the sake of their fellow men—accursed, diseased, and dying under the influence of alcohol—they could not afford to have done with the subject, however well worn it might be. For the sake of their honour as a profession—for nearly every popular belief in the efficacy and virtue of alcohol was false, and their high authority was claimed in support of the allegations that it increased the body heat, that it added strength and endurance to the muscles, that it was necessary to health, that it controlled hæmorrhage, that it was a disinfectant and protected from infection—and it was their duty to themselves and to the public to correct these beliefs, or at least to say that they had not their authority, for the sake of their fellow-men—for it was as much their duty to save them from the ravages of alcohol as from the ravages of cholera or any other preventable disease. He thus summarised his conclusions about alcohol taken as a beverage in health in varying quantities from physiological moderation to excess: (1) alcohol is a poisonous drug whose special action in the body is a brain cell paralysant, destroying these cells in the inverse order of their development; (2) alcohol disturbs the circulation, leading to a loss of body temperature and an accumulation of waste products in the blood, accompanied by great depression and muscular weakness; (3) alcohol tends to produce in all, proportionate to the quantity taken, cirrhotic diseases of all the tissues and organs of the body; (4) alcohol tends to produce an irresistible craving for itself; (5) alcohol predisposes to all infectious and many organic diseases; (6) alcohol diminishes the chances of recovery in those attacked by any diseases other than those resulting from its use; (7) alcohol increases the sick-rate and shortens life; (8) alcohol predisposes to phthisis and all tuberculous diseases; (9) alcohol increases lunacy and crime; (10) alcohol is absolutely unnecessary to health; (11) alcohol promotes hæmorrhage and does not check it; and (12) alcohol adds no muscular strength to the body—at most it encourages the expenditure of its force in the shortest possible time. If these were the true facts about alcohol taken as a beverage in health, they were as medical men, individually and collectively, in duty and in honour bound to make them known to the public.

Mr. SYMES (Christchurch) thought their efforts should not be so much directed towards preaching prohibition as towards reforming the system that existed. That reform would, he thought, have to be brought about in many ways. The beer supplied in the public-houses at the present day, particularly in the colonies, was not wholesome. The use of sugar and glucose in the manufacture of beer was most injurious to health. Some improvement might be made in the present system of supplying unwholesome and intoxicating beer.

Dr. OGSTON (Dunedin) could not agree with Dr. Chapple's statements with regard to the comparison between the abuse of alcohol and its moderate use. Alcohol was useful in small doses and harmful in big doses, but the same argument might be made to tell against tea.

Mr. SPRINGTHORPE said that as lecturer on Hygiene to the University of Melbourne he naturally had to go into this matter very carefully. It was a matter of great complexity, and although they all saw the evil effects of excess in the use of alcohol he did not think Dr. Chapple had gone deep enough down. The fact was that the human race in civilised parts was not absolutely and permanently healthy. Every race on the globe seemed more or less irresistibly drawn to a stimulo-sedative of some sort—if it was not alcohol it was some other stimulant. It was not merely a question of craving, it was an absolute instinct. They might prohibit a man's liquor and he would go in for stimulants in some other form. In Ireland they went in for ether drinking, and there were cocainists, morphinists, and all sorts of "'ists." He regarded it as a matter of the first importance to keep drink as much as possible from the young, to make its form as suitable as possible to the individual and his environments, and to see that a thoroughly sound article was obtained. This was, he thought, the direction in which legislation should tend.

Dr. STENHOUSE (Dunedin) said Dr. Chapple seemed to imagine that his case was true if he could show, on the one hand, that a moderate consumption of alcohol was not necessary to the health of the body, and if he could also show, on the other hand, that the consumption of alcohol in excess was detrimental to the body. But that was not sufficient, because if it could be shown that the moderate consumption of alcohol added somewhat to the pleasures of life, if it diffused happiness among mankind to some extent without being injurious, that was a great matter, seeing that we were not living in an ideal world and that the world was full of ups and downs, of anxieties and sorrows of one kind and another. He (Dr. Stenhouse) was sure, from his own observation, that the moderate and occasional use of alcohol was beneficial and that it enabled many a man to tide over a period of depression which otherwise might prove very disastrous. He had not the slightest doubt that the moderate consumption of alcohol after middle life was of considerable benefit and that it was advantageous to the prospects of longevity.

Mr. H. A. DE LAUTOUR (Oamaru) said that it was not his experience that alcohol-takers were more liable to typhoid fever than water-drinkers were, and he thought the statement was hardly reasonable, for they knew that typhoid fever was far more prevalent in children than in adults, and children were not drinkers.

Mr. MASON (Otaki) said that he enjoyed a glass of beer and thought it did him good, and he had no doubt that it was only when alcohol was taken in excess that the verdict could be given against it. Speaking from the physiological point of view, he thought there was no question that the teetotalers had "the best end of the stick."

Dr. MICKLE (Christchurch) had come to the conclusion in regard to alcoholic beverages that all healthy people did not require them and were better without them; but a very large minority of the population were undoubtedly benefited by their use. The reform he would like to see would be the establishment of a licence allowing the licensee to supply alcohol only as a beverage at meal times.

Hygiene as a School Subject.

The PRESIDENT moved: "That, in the opinion of this Congress, elementary hygiene should form a subject for instruction in all State-supported schools, and that where practicable teachers in such schools should be required to undergo a course of instruction in the same subject previously to their being licensed to teach."—The motion was carried.

Sanitary Administration.

The PRESIDENT also moved: "That this Congress respectfully beg to draw the attention of the different colonial Governments to the scheme by which the authorities of British India propose to deal with sanitary administration and the public health, with a view to the local adoption of a portion thereof as may be suitable to their respective requirements; and that they be respectfully asked to authorise a conference of their medical advisers empowered to report as to the best manner in which sanitary progress may be furthered."—The motion was carried.

Other Matters.

Papers by Dr. MULLINS on Death Certification and Registration in New South Wales and by Mr. MCDOUALL on Insanity from Association were received.

MIDWIFERY.

The address in the Section of Midwifery was read by Mr. MORIER, in the absence of Dr. WAY, the President of the Section. It dealt chiefly with the old maxim that "Cleanliness is next to godliness" and the bearing of the adage on puerperal fever.

Papers were read on Puerperal Eclampsia, with Special Reference to Urea Excretion, by Dr. W. W. R. LOVE, of Brisbane; and on a New Clamp, designed on an entirely new principle, for securing the broad ligament in vaginal hysterectomy, by Mr. J. H. TOWNEND of Christchurch.

GENERAL MEETING.

THE DISCUSSION ON TUBERCULOSIS.

The meetings of the various Sections were suspended in the forenoon of Wednesday, Feb. 5th, to enable a general meeting of members of the Congress to enter fully into the discussion of the principal topic set apart for the Congress—viz., Tuberculosis in Man and Animals.

Professor WATSON (Adelaide) opened the discussion and pointed out that it was meant to awaken the public

to the fact that tuberculosis is an infectious and therefore preventable and (under favourable circumstances) a curable disease. Living as they did in colonies where pastoral interests are paramount they had been wise in calling in to their assistance their best allies—the veterinary surgeons—men who had had ample opportunities of becoming conversant with the diversified manifestations of tuberculosis occurring in the domestic animals. It had been said that tuberculosis is Nature's method of working off the weak—a disease of degenerate tissues in a degenerate race. Tubercalisation of an individual did not appear to confer immunity in the same way as an infectious fever, such as small-pox, after it had run its course appeared to do. As regards South Australia, apart from alcohol, hydatids, and syphilis, the rapid extinction of the native race was due entirely to tuberculosis.

Mr. SPRINGTHORPE dealt with the more strictly medical aspects of the disease. He said: A disease like tuberculous disease—which, according to Hirschberger, kills one-fourth of all children dying under one year old; is responsible, according to Ransome, for one-half of all deaths during marriageable ages; is common, according to M'Lachlan and others, among the aged; and causes in all some 16 per cent. of the total mortality in civilised lands—merits special attention at a medical congress. Nor have we in Australasia any relative immunity from this universal scourge. Dr. M'Laurin's statistics show that it is the greatest single cause of death throughout Australasia, and that it is already as common in our large cities as in their European compeers. Our peculiarities, as Dr. Colquhoun, Dr. Corswell, and others have shown, are simply its comparative rarity in the young and frequency in the aged, and its later and slower affection of the middle-aged. It represents a great advance to be able to maintain that the disease is not possible in the absence of the tubercle bacillus. Gradually we are becoming acquainted with the life-history of this extraordinary germ. We have long known that it resists freezing, boiling, and putrefying, and have lately recognised that it is not an essential parasite in warm-blooded animals, but, under favourable circumstances, may pass a saprophytic existence in polluted environment. As to its frequency in man, the appalling death record may be taken as an incomplete illustration. Equally suggestive is its prevalence amongst the bovines. German and English statistics show a tuberculous infection of from 15 to 20 per cent. of the cattle slaughtered, and such Australian records as are available prove that our stock are affected in at least equal proportion. And as regards the extent of intermediate contamination of dwellings, buildings, conveyances, subsoil, &c., we have sufficient cause in the myriads of bacilli coughed up daily with tuberculous sputum, estimated at the Johns Hopkins University at hundreds and thousands of millions per patient, some no doubt dead, as Pfeiffer has shown, but many still living and virulent. The actual result is seen in the prevalence of the disease wherever people congregate together and take no care of the infected sputum. Unfortunately, in most cases, at least of advanced phthisis, the infection is not simple, but mixed. Antecedently to tuberculous infection frequently comes invasion by the influenza bacillus—the pneumococcus—the systemic weakness produced by zymotic and other diseases, and side by side with the tubercle bacillus itself are found a large variety of pyococci who now find a suitable nidus for their growth. It is to these indeed that, following good authorities as well as recording my own experience and opinion, I venture to think are to be attributed most of the septic phenomena which cast such a cloud over advancing phthisis—e.g., the hectic fever, the emaciation, the sweats, the profuse sputum, the "streptococcus curve," &c. And the recognition of this mixed infection is not only valuable pathologically—it is essential to a satisfactory therapeusis. Next to its recognition the important point regarding the bacillary factor in tuberculous disease is the understanding of the means of entrance and of exit. It is beyond question that environment may be polluted by tuberculous discharges, and that one serious source of tuberculous invasion lies in such polluted environment. Air and earth thus polluted are certainly frequent and extensive agents in the spread of tuberculous disease. Stop this avenue of invasion, and how much subsequent disease might not be prevented. Equally, if not more, important is the great question of tuberculous meat and milk. As regards dairy stock, statistics prove that it is far more common amongst aged milkers than in other classes of stock, with a greater tendency also to generalisation and thus to transmission through meat and milk. Systematic and skilled inspection of the food and milk supply thus stand out as among the most important of the hygienic functions of a government. It is to the credit of English medicine that it has persistently advocated the second factor in tuberculous disease—the constitutional weakness, itself a disease, upon which depends not only successful invasion, but rate and extent of spread. For the healthy human being possesses a resisting power which renders him practically immune against the bacillus so long as he remains healthy and though the disease cannot start without the bacillus, it cannot spread without the susceptibility. For the full understanding of the tuberculous question the English constitutional factor is as essential as the Continental germ factor. We require the union of the two. But whatever its inherent nature we find chemically that it varies wonderfully in degree and that the practical difficulty is to discover in what part of the scale the individual case is to be placed, a difficulty which is often insuperable, for there is absolutely no necessary relation between progress and extent. The fact is that the constitutional factor not only varies in different individuals, from nothing to infinity, but that it varies in the same individual according to the state of the constitutional health. Herein comes the value of the inflammatory origin of phthisis, once so much insisted upon; and hereon also hinges the possibility of reinfection at any subsequent time. The diagnosis of tuberculous disease is primarily bacillary and not histological, Yet how few physicians—I speak of English and Australian physicians, and am careful to exempt our Continental brethren—ever search for the bacillus or even make themselves competent to do so. Outside metropolitan hospitals it is the rare exception to find any such attempt made, and yet certainly a diagnosis, with all that depends thereon, is often only thus obtainable. The bacillary test, however, is defective. There may be no sputum, examination may give simply negative results, and the test itself gives no information as to the presence or extent of the constitutional factor. Hence it requires to be supplemented by clinical examination. Unfortunately neither constitutional weakness nor slight tuberculous infection is necessarily recognisable even by the most skilled clinician. Examination is often suggestive rather than conclusive, and this in the very cases where certainty is most desirable. Who, for example, has not met cases in which he found himself unable to be sure as to the tuberculous infection of fibroid phthisis, apical consolidation, apical pleural adhesion, pleural effusion, pleuro-pneumonia, chronic bronchitis, bronchitic asthma, or disease of bones, skin, &c.? As an invaluable aid in such diagnosis I venture strongly to recommend tuberculin. With Whittaker[1] I hold it established that a local reaction following injections of tuberculin is proof of the existence of tubercle at that point, and that a characteristic febrile reaction after injections of 0·005 or less may be taken as practical proof that tubercle is present somewhere in the system. After more than four years' continuous use of tuberculin I may perhaps claim to speak with some weight upon this point, and I venture to tell this Congress that I have always found tuberculin reliable diagnostically when used with discretion I place preventive treatment as incomparably before everything else. This includes the destruction of all approachable bacilli before their contamination of environment, the disinfection of infected environment, and the prevention of tuberculous infection through air, food, and milk. Some, at least, of these requirements demand State interference if they are to be satisfactorily performed; but it lies, in my opinion, at the door of our profession to do infinitely more than at present attempted. It is almost incredible—yet some years' continued inquiry have conclusively proved it to me—that scarcely a percentage of medical men give any instructions worthy the name for the destruction or disinfection of the sputum, and still less make any inquiry into the condition of the dairy from which the milk of their sick children is obtained, or direct that the unknown milk should be scalded before use. Who, again, pay attention to the killing of bacilli that must have collected in rooms and dwellings frequented by expectorating phthisical patients! And yet, in the absence of these essential precautions, we claim to be treating the case! And, worse still, we permit others—relatives, friends, and strangers—to run known risks of infection without word of warning or advice, with the frequent and unnecessary result of extension of infection

[1] Sajous' Annual of the Medical Sciences, 1892.

to those who were previously free therefrom. If, therefore, we are to sensibly lessen its ravages the first essential, in my opinion, is the more general recognition that the disease is to some extent infectious, and the spread of information as to the precautions which must be adopted if infection is to be prevented. I am one of those who believe in placing tuberculosis amongst the infectious diseases.

[Mr. Springthorpe here dealt at length with the subject of Tuberculosis, and concluded:]

As regards drugs, I think a lecturer on therapeutics has little to add. We all know the place filled by cod liver oil, hypophosphites, arsenic, quinine, strychnine, iron, the mineral acids, &c. Few probably will deny that we have no specific, that creosote and its allies are of value against sepsis rather than against the bacillus, and that the different symptoms which may arise during the course of the disease require from day to day as well as from year to year all the different combinations of remedies that the greatest experience and the wisest skill can suggest. Symptomatic treatment is not what we should aim at, but in a disease such as tuberculosis is at present it is often our only resort, and from the palliative point of view it is gratifying to know that we can so frequently relieve, even though cure is out of the question. But it would be impossible, even if it were appropriate, in such a paper as this to attempt any particularisation in such matters. Let me end where I began. It is by our preventive measures rather than by our remedial that we shall check this fell disease, which is so widespread that, according to Lord Playfair, it is the only one above the horizon from which we may anticipate the extinction of our race.

Mr. G. A. SYME (Melbourne) followed, addressing himself to the surgical aspects of tuberculosis.

Mr. A. PARK, M.R.C.V.S., exhibited a number of specimens of diseased portions of animals.

Mr. MURRAY-AYNSLEY (Christchurch) thought that they should make a firm protest against persons being sent out from the old country when they were seriously affected.

Mr. GARLAND (Oamaru) brought to the notice of the Congress the results of his treatment of cases with creosote, and advocated that this should be coupled with residence at high altitudes. Patients would often improve in such places without any treatment, and with the creosote treatment many cases would be very hopeful indeed.

Mr. S. S. CAMERON, M.R.C.V.S., said he did not think sufficient emphasis had been laid upon the universality of the disease in all species. The only domestic animals that were comparatively immune were the goat and the donkey. The great trouble in the past had been the want of opportunity for medical men to trace the source of tuberculosis. He took the opportunity of correcting the statement that tuberculosis could not be detected in cooked meat.

Dr. CHAPPLE (Wellington) said that four years ago, when spending a holiday on the west coast of the north island, he was asked to look at some young stock that had been bought for the purpose of being killed and examined. They were what were called "wasters," and doubt existed as to the cause of the disease. So virulent was this disease that whenever farmers noticed that cattle on good pasture began to waste they were sent to the stockyards for sale. An examination proved that the intestinal canal of these animals was studded with tuberculous ulcerations. That opinion was confirmed by Dr. Roberts, and when it became known within a fortnight fifty head of cattle were slaughtered. It was simply want of knowledge that caused the settlers to traffic in these animals, and as soon as it was really understood they were suffering from an infectious disease they were destroyed, and since then there had not been nearly so much tuberculous disease in that part of the colony.

Dr. KENNY (Melbourne) gave instances in his experience of the singular virtue of tuberculin as a diagnostic agent and of its value in treatment.

Dr. LOVE (Brisbane) advocated the public abattoir system, thorough inspection of meat offered for sale, and supervision of dairies. Canada and America were far ahead of the Australian colonies in this respect. In Canada (Ottawa, at any rate) the dairy cattle were subjected to periodical examination by means of tuberculin. In Denmark the authorities had instituted the tuberculin test, and this had been supplemented by a vote of £10,000 from the Government funds for the compensation of owners whose cattle were destroyed. The Central Board of Health in Sydney had instituted an examination on similar lines, and he understood paid 30*s.* a head for every beast which was condemned as tuberculous.

Dr. LINDO FERGUSON (Dunedin) submitted for inspection under the microscope tuberculous matter taken from the eye of one patient and the nose of another.

Dr. A. MARTIN (Wellington) suggested that strong representations should be made to the Government to discontinue the issue of New Zealand bank notes and to close up old clothes' shops. Remarks were also made by other members and

Mr. SPRINGTHORPE, in replying, said it seemed to be thought that because he had shown what the tubercle bacillus could do he wished to sound a pessimistic note. Nothing was further from his thought. He was one of those who believed that more people recovered from tuberculous diseases than ever died from them, but tuberculosis was the biggest disease the profession had to cope with. With regard to the question as to whether tuberculin introduced a reaction in other diseases, he replied that it was considered to be established by Professor Whittaker and others that a local reaction was proof positive of tuberculous disease. So far as he knew there had been no actual case where no tubercle was present, but they must remember there were cases of mixed affection. He thought a local reaction was proof positive, but he said nothing about a general reaction. Under the condition in which bacilli occurred in milk it was found that boiling did destroy most if not all. It was found that for practical purposes boiling or even scalding the milk had the effect of diminishing the number of the bacilli and of reducing their virulence, so that they did not get the result from boiled milk that they would get from unboiled.

Preventing Incurables from Emigrating.

Side by side with the main question there were some important observations on the advisability of taking steps to prevent advanced cases from being sent to the colonies.

Dr. TAYLOR YOUNG (Grafton, N.S.W.), as one of those to whom their professional brethren at home had recommended Australia, said that when he came out he learnt for himself which part of Australia to go to, and thought the profession should try to find out not only how to prevent disease, but how to prevent the wholesale "dumping down" of phthisical patients in Australia. As a Congress they would do good to suffering humanity if they offered a united front and endeavoured to insist on their Legislatures doing something to prevent the introduction of these patients to the colonies. He had seen proof of the introduction of these sufferers on his way across from New South Wales to New Zealand. He found the shipping companies indiscriminately classing together in close cabins dying phthisical patients and young people in whom there was no trace of the disease. On the *Manapouri*, coming from Sydney to Auckland there were three persons all of whom had come out in the same ship of the Orient line for the benefit of their health. He did not wish to dishearten them, but he thought to himself that the medical men at home must have desired to get rid of them. He hoped the Congress would do their best to put before the world the fact that Australia was not the place for these patients; he meant, of course, patients in the later stages of the disease. He was aware that Mr. Sydney Jones of New South Wales was now on the right lines for the early treatment of cases, and he believed that the endeavour to form model farms in the interior for such cases would result in many receiving benefit in the same way as he himself had done.

Dr. LOVE (Brisbane) observed that the death-rate from phthisis in Victoria and Queensland averaged from 12 to 14 per 10,000 per annum; in Great Britain it was about 16; and in New Zealand, which, he was happy to say, was low on the list, it was 6 to 8 per 10,000. If the general public at home were made aware of these figures they would be less inclined to send subjects out. They should also be made aware of the fact that cases of phthisis were now just as numerous among native-born colonists as among foreign-born.

Dr. MULHOLLAND (Melbourne) said it was not the practice at home for medical men to send cases of phthisis to the colonies. It was done on the advice of friends and not on the advice of medical men. He had attended the hospitals in Glasgow and in London, and in no instance had he heard medical men say to their patients that they should go to the colonies. He had heard them tell patients not to go.

The PRESIDENT remarked that there was one point which had struck him in the discussion. There was a certain interesting Bill which had exercised the minds of the people in this colony named the Undesirable Immigrants Bill. He

was not quite sure whether, if the Bill had been carried into law, they would have had the pleasure of seeing in New Zealand all who were present at the Congress; but it might be that after all there were some points in the Bill which would be of great value to the country.

The following motion was then carried unanimously:—"That a sub-committee be appointed, consisting of Dr. Ogton and Mr. Grace (of New Zealand), Professor Watson and Dr. Hamilton (of South Australia), Dr. Knaggs and Dr. Worrall (of New South Wales), Dr. Love (of Queensland), Professor Allen and Mr. Syme (of Victoria), with power to add to their number, to draw up and report to Congress for approval: (*a*) Printed slips of advice, suitable for general use by medical men in dealing with cases of phthisis; and (*b*) resolutions to be brought under the notice of the Governments of the different colonies, having as their object the general preventative measures deemed necessary for the prevention of the spread of tuberculous disease."

THE CLOSING MEETING OF THE CONGRESS.

The Next Congress.

The PRESIDENT (Dr. Batchelor) said the first business was the choice of the place of the next meeting of Congress. A letter had been received from the medical men of Brisbane inviting the Congress to meet in that city in 1899, and he moved that the invitation be accepted.

Dr. LOVE (Brisbane) supported the motion. The year 1899 had been proposed as the year of the next Congress and he would suggest that the time should be the winter. Brisbane had perhaps the finest climate in the world during the winter months, whereas the summer would, he feared, be found too hot for the comfort of visitors. Any month from May to October would do, and he should say that about July would be preferable. Fine weather could be pretty well depended on at that season.

The motion was carried unanimously.

Mr. GARDE (Brisbane) proposed that Dr. JOHN THOMSON of Brisbane be elected president.

The motion was carried *nem. con.*

Tuberculosis.

The sub-committee appointed to draw up resolutions recommended the approval of the following:—

"1. That this Congress expresses the opinion that it is unwise and cruel to recommend advanced cases of phthisis to seek Australasia as a health resort; that whilst there are many places in the different colonies of great climatic value in the earlier and curable stages the coastal regions generally are to be regarded as unsuited for almost all stages. (Copies of this resolution to be forwarded to the English medical press.) 2. That this Congress recommends for the use of medical men in their routine treatment of phthisis the printed table of advice and information originally drawn up by the Australian Health Society. 3. That recognising the serious extent to which tubercular disease prevails throughout Australasia, the fact that the disease is to some extent an infectious one, spreading through the medium of infected milk, meat, and air, this Congress begs respectfully to bring under the notice of the Governments of the different colonies the necessity which exists for the continuous and skilled inspection, veterinary as well as medical, of cattle and dairy stock of dairies, milk shops, and abattoirs; and for the proper disinfection of the public spittoons, conveyances, buildings, &c., known or suspected to have become infected. The Congress also strongly urges the general use of tuberculin as a test for the presence of tubercular disease in dairy and other stock."

Mr. SPRINGTHORPE moved the adoption of the resolutions. The sub-committee was representative of each colony and the resolutions were arrived at unanimously.

The motion was carried.

Testing the Vision.

The sub-section concerned with eye, ear, and throat diseases presented the following report:—

"1. That the Governments of the different colonies should take steps to ensure the proper testing of the vision of all men who are employed either at sea or in railway services whose duties are such that the lives of others depend on the acuteness of their sight either for form or colour.

"2. That all examinations of vision should be made by a properly qualified ophthalmic surgeon.

"3. That a high standard of vision and perfect colour sense should be insisted on for all men who are engaged as deck hands at sea and who have to undertake duty on the look-out or in steering. Also, that such a standard be fixed for those engaged in the engine-room as will suffice for their own safety and that of the ship.

"4. That a high standard be fixed for vision and perfect colour sense required in all deck officers of ships, that they be re-examined on each promotion, and after reaching the rank of master at intervals of five years.

"5. That the attention of the different Governments be called to the report of the Committee on Colour Vision presented to the Houses of Parliament in June, 1892, and to the report of the Council of the British Medical Association on the efficient control of railway servants' eyesight published in the same year, and that the standards recommended in these reports be taken as the basis on which the requirements of vision should be framed.

"6. That the attention of the different Governments be especially directed to the law passed in the State of Alabama in 1887 dealing with railway servants' eyesight, entitled 'An Act for the Protection of the Travelling Public against Accidents caused by Colour-blindness and Defective Vision,' as a model on which suitable legislation might be based.

"7. In order to put in a definite form the standard that should be aimed at the Congress suggests that no candidate be allowed to enter the dangerous services unless he is free from any chronic inflammation of the conjunctivæ or lids; he must be free from strabismus, and possess perfect equilibrium of the external ocular muscles; his distant vision must not be less than ⅞ in one eye and ⅞ with the other without glasses, the tests to be made with Snellen's types; he must have a perfect colour sense, tested both with Holmgren's wools and with distant colour tests under varying conditions; and he must also have a normal field of vision for both form and colour. Hypermetropia of more than one diopter should be a bar to entering the services."

Dr. LINDO FERGUSON (Dunedin) proposed the adoption of the resolutions. They were the result of a discussion, and it was thought that if they were adopted and forwarded to the various Governments they might pave the way to legislation which would lead to the greater safety of the travelling public. Some of the instances given during the discussion were enough to make one's hair stand on end.

The motion was carried.

The proceedings terminated with various complimentary votes of thanks to all who had taken part in what must be regarded on all sides as a most successful gathering.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen have passed the First Examination of the Board in the subjects indicated, under the "four years" regulations, at the April quarterly meeting of the Examiners, viz.,

Part I., Chemistry, including Chemical Physics:

Gould, Horace John, Middlesex Hospital.
Parlett, Frank, private study.

Part II., Materia Medica:

Abbott, Horatio White, Charing-cross Hospital.
Aldred, Fred Marsden, University College, Liverpool.
Beck, William, Aberdeen and Edinburgh Universities.
Beley, George, St. Thomas's Hospital.
Blackburn, Vernon Kent, Firth College, Sheffield.
Blackstone, Willoughby Arthur, University College, London
Campbell, Alfred, Sydney and Edinburgh Universities.
Cogswell, Philip Dare, St. Mary's Hospital.
Dunkin, Silas Ethelbert, Charing-cross Hospital.
Dury, George Kennion, Owens College, Manchester.
Dutton, William, Owens College, Manchester.
Foster, George Muir, University College, London.
Geach, Robert Neville, St. Bartholomew's Hospital.
Henchley, Albert Richard, Middlesex Hospital.
Millar, Alexander Fleming, St. Thomas's Hospital.
Moore, Eugene, Guy's Hospital.
Palmer, Charles John Linton, University College, Liverpool.
Preston, John Alexander, Queen's College, Belfast.
Provis, Cuthbert Howard Ralston, St. Bartholomew's Hospital.
Roberts, Harry Trist, Charing-cross Hospital.
Rooke, Frederick James Faulkland, Middlesex Hospital.
Salmon, Charles Arthur Craven, Guy's Hospital.
Stamford, Robert Basil, Guy's Hospital.
Treusch, John Benjamin August, Guy's Hospital.
Tucker, William Hancock, St. Thomas's Hospital.
Williams, Herbert Stephen Edgcumbe, St. Thomas's Hospital.
Wilson, Graham Lionel John, St. George's Hospital.
Worts, Charles Clifford, Guy's Hospital.
Young, Bertram Michell, St. Thomas's Hospital.

Part III., Elementary Physiology:

Alliott, Richard, Oxford University and St. Thomas's Hospital
Butler, Thomas Langton, St. Mary's Hospital.
Clemens, James Ross, St. Thomas's Hospital.
Duncan, John Marie Sloane Duncan, London Hospital.
Edwards, William Howard, Guy's Hospital.
Leathem, Alfred Newman, Charing-cross Hospital.
Molineux, Bernard Newmarch, St. Thomas's Hospital.
Nicholls, Ernest Albert, London Hospital.
Nicol, Burton Alexander, Charing-cross Hospital.
Pilcher, Cecil Westland, Oxford University.
Seville, George Edward, Owens College, Manchester.
Thompson, Arthur, St. Bartholomew's Hospital.
Widegren, Mathias Wilhelm Eberhard, St. Thomas's Hospital.

The following gentlemen passed the First Examination of the Board in the subjects indicated, under the "five years" regulations, at the April quarterly meeting of the examiners:—

Part I., Chemistry and Physics:

Ackery, Edward Faulkner, private study.
Adam, Thomas, Firth College, Sheffield.

Bartlett, Basil Sorley, St. Paul's School, West Kensington, and University College, London.
Bennett, Francis Grey, Cambridge University and University College, London.
Clark, Harold Gordon, University College, Bristol.
Cohen, Edward, Guy's Hospital.
Coke, William Francis Harriott, St. George's Hospital.
Compton, Spencer Langley, University College, Bristol.
Coombes, Henry Reginald, Westminster Hospital.
Dixon, Godfrey Brookes, Charing-cross Hospital.
Donaldson, Samuel, St. Mary's Hospital.
Drabble, Charles Clement, Firth College, Sheffield.
Duprey, George Perry, Middlesex Hospital.
Fagan, Horace Charles John, St. Paul's School, West Kensington.
Fenton, Thomas Gerald, St. Thomas's Hospital.
Forshaw, William Herbert, Firth College, Sheffield.
Foulds, Matthias Frederick, Owens College, Manchester.
Griffith, Richard, London Hospital.
Hardenberg, Emile John Frank, Guy's Hospital.
Hobbs, Albert Remington, St. Mary's Hospital.
Holroyd, Benjamin, Yorkshire College, Leeds.
Hoyle, John, Owens College, Manchester.
James, Herbert, Merchant Venturers School, Bristol.
Jaques, Robert, University College, Liverpool.
Jellicoe, Stanley Coleman, Middlesex Hospital.
Jones, Ernest Guy, Owens College, Manchester.
Kelly, Thomas Thelwell, Middlesex Hospital.
Kilpatrick, James Armstrong, University College of South Wales, Cardiff.
Kroenig, Victor Richard Fowell, King's College, London.
Lawson, James Ward, Charing-cross Hospital.
Leach, Herbert, Yorkshire College, Leeds.
Lister, Walter, Yorkshire College, Leeds.
Littlejohn, Edward Salterne, St. Paul's School, West Kensington.
Meadows, Sydney Manvers Woolner, Middlesex Hospital.
Nicholson, William, Owens College, Manchester.
Pitts, Arthur Gentry, Charing-cross Hospital.
Pooley, John Milnes, St. Mary's Hospital.
Potter, Godfrey Russell, Yorkshire College, Leeds.
Reardon, Arthur Francis, St. Thomas's Hospital.
Reid, Douglas Harold, Otago University and St. Thomas's Hospital.
Robinson, James Frederick, Birkbeck Institute and Guy's Hospital.
Rogers, Edward Norman Tilly, Middlesex Hospital.
Sayer, Thomas, Yorkshire College, Leeds.
Seager, Frank Randolph, Mason College, Birmingham.
Sly, Alfred Victor William, University College, London.
Sodenberg, John Emil, Westminster Hospital.
Staniforth, Henry Edward, Firth College, Sheffield.
Stevenson, Francis Daniel, St. George's Hospital.
Terry, Reginald Herbert, Guy's Hospital.
Thomson, Allen Bernard, King's College, London.
Vores, Cyril Preston, Westminster Hospital.
Wakefield, Walter, Mason College, Birmingham.
Wood, Maurice Dunbar, Guy's Hospital.
Wynne, Graham Shaw Arnold Smith, St. Bartholomew's Hospital.
Young, William John, University College, Liverpool.

Part II., Practical Pharmacy:

Anderson, William Monro, Charing-cross Hospital.
Bannerman, Walter Biggar, London Hospital.
Cazaly, William Henry, St. Bartholomew's Hospital.
Chaplin, Henry Ayrton, St. George's Hospital.
Cohen, Edward, Guy's Hospital.
Cory, Samuel Henry Gilbert, St. Mary's Hospital.
Cruise, Richard Robert, St. Mary's Hospital.
Douglass, Percy Clarence, St. Mary's Hospital.
Douse, Thomas Alexander, Charing-cross Hospital.
Evans, Frederick Hudson, King's College, London.
Fowler, Edwin Samuel George, Yorkshire College, Leeds.
Francis-Williams, Cecil Hughes, St. George's Hospital.
Graham, Allan Gordon, St. Thomas's Hospital.
Hammerton, George Herbert Leonard, Firth College, Sheffield.
Harrison, William Walter, Guy's Hospital.
Hughes, Robert, Owens College, Manchester.
Hunt, Albert William Dunning, Middlesex Hospital.
Jones, Richard Arthur, Charing-cross Hospital.
Kirkeonnel, Edward Birchall, Owens College, Manchester.
Lewis, Arthur Daniel, Guy's Hospital.
Mossop, Charles Henry, Guy's Hospital.
Newham, Hugh Basil Greaves, St Thomas's Hospital.
Newling, Harry Tudor, St. Mary's Hospital.
Outred, Charles Deane, Guy's Hospital.
Pearson, Thomas, Charing-cross Hospital.
Powell, John Edward, Guy's Hospital.
Richardson, Walter Silverwood, Guy's Hospital.
Scott, Aleck Lauriston, St. Bartholomew's Hospital.
Skevington, Joseph Oliver, St. Mary's Hospital.
Smallwood, Matthew Edmund, University College, Liverpool.
Smith, Ernest George, St. Bartholomew's Hospital.
Smith, Malcolm Arthur, Charing-cross Hospital.
Symes, Ernest, University College, Bristol, and St. Mary's Hospital.
Walker, Herbert John, King's College, London.
Walton, Henry Beckles Gall, St. Mary's Hospital.
Watt, James George, Guy's Hospital.
Wingate, Basil Fenton, St. Mary's Hospital.
York, Thomas, Westminster Hospital.
Young, William John, University College, Liverpool.

Part III., Elementary Biology:

Adams, Ernest Beadon Dixon, St. Bartholomew's Hospital.
Adams, Henry Cyril, St. Bartholomew's Hospital.
Adam, Thomas, Firth College, Sheffield.
Alderman, Harry Cole, Yorkshire College, Leeds.
Anderson, William Monro, Charing-cross Hospital.
Arch, Arthur James, Mason College, Birmingham.
Ascough, Matthew Thomas, Owens College, Manchester.
Ashley, Herbert Ernest, St. Bartholomew's Hospital.
Attwood, Richard Denton, Guy's Hospital.
Awdry, Arthur John, Mason College, Birmingham.
Aylen, Ernest Vaughan, London Hospital.
Baggs, James Charles, St. Thomas's Hospital.
Barnett, Henry Edward, St. Mary's Hospital.
Bartlett, Charles Eastty, Guy's Hospital.
Bartlett, John Allen, University College, Bristol.
Beale-Browne, Thomas Richard, Guy's Hospital.
Bennett, Kenneth Hugh, University College, London.
Bishop, Frederick Michael, St. Bartholomew's Hospital.
Blizzard, Walter Harry Stanley, Mason College, Birmingham.
Body, Thomas Munn, St. Bartholomew's Hospital.
Bond, Cecil William, St. Mary's Hospital.
Bostock, Arthur Hastings, St. Bartholomew's Hospital.
Bransbury, Henry Arthur Bramsdon, St. George's Hospital.
Breeze, Joseph Ernest, Mason College, Birmingham.
Broomhall, Benjamin Charles, London Hospital.
Burd, Reginald Shirley, Mason College, Birmingham.
Butler, Archibald, St. Bartholomew's Hospital.
Chalk, Charles Launder, St. Bartholomew's Hospital.
Challans, Frank, London Hospital.
Chaplin, Henry Ayrton, St. George's Hospital.
Clark, John Wilders Hambly, London Hospital.
Clarke, Arthur Allen Foster, St. Thomas's Hospital.
Coates, John, St. Thomas's Hospital.
Cohen, Edward, Guy's Hospital.
Coke, William Francis Harriott, St. George's Hospital.
Compton, Alwyne Theodore, St. Bartholomew's Hospital.
Cory, Harold Myrie, Mason College Birmingham.
Cox, George Ralph, St. Mary's Hospital.
Cross, Francis George, Guy's Hospital.
Cruickshank, Alex Douglas Macdonell, London Hospital.
Curtis, Frederick, Guy's Hospital.
Da Silva, Joseph Clement, Guy's Hospital.
Davey, James, London Hospital.
Davidson, William Henry, London Hospital.
De Carteret, Sylvester, St. Bartholomew's Hospital.
Donaldson-Sim, Ernest Alfred, St. Bartholomew's Hospital.
Downton, Arthur Sydney, London Hospital.
Duigan, Victor John, St. Bartholomew's Hospital.
Duncan, Emile Horace George, St. Bartholomew's Hospital.
Dunstan, Robert, London Hospital.
Edwards, Arthur Baynes, St. Bartholomew's Hospital.
Edwards, Thomas Henry, St. Thomas's Hospital.
Ellis, Frank Heygate, St. Bartholomew's Hospital.
Enderby, Thomas Sidney Dawber, St. Thomas's Hospital.
Faber, Hamilton Stanley, St. George's Hospital.
Felton, Edgar Hall, Guy's Hospital.
Forrest, Frank, Owens College, Manchester.
Fort, Percy Reginald, St. Mary's Hospital.
Foster, Edward Cecil, University College, London.
Foulkes, Samuel Newall, London Hospital.
Furley, George Frederic, St. Bartholomew's Hospital.
Gaitskell, Charles Edward, Guy's Hospital.
Garle, Robert Hubert Williamson, St. Thomas's Hospital.
Garstang, Walter, Owens College, Manchester.
Gauntlett, Owen Binns, St. Thomas's Hospital.
Gilbert, Walter Raleigh, St. Thomas's Hospital.
Gill, Clifford Allchin, University College, London.
Gleig, Percy North, Charing-cross Hospital.
Goodair, Percy Hamilton, St. Thomas's Hospital.
Gould, Alexander Cyril, St. Mary's Hospital.
Graham, Cecil Irving, St. Mary's Hospital.
Greaves, Ernest Walters, St. George's Hospital.
Green, Arthur Llewellyn Baldwin, St. Bartholomew's Hospital.
Griffin, Gerald, London Hospital.
Grimshaw, Charles Richard Atkinson, St. Bartholomew's Hospital.
Hagger, Roger Lionel, University College, London.
Hanbury, Langton Fuller, St. Thomas's Hospital.
Hanbury, Reginald Janson, St. Bartholomew's Hospital.
Hardenberg, Emile John Frank, Guy's Hospital.
Hay, Malcolm Bell, University College, London.
Haydon, Maurice Willoughby, St. Thomas's Hospital.
Haydon, Walter Turner, St. Thomas's Hospital.
Hayne, Percy Alfred, St. George's Hospital.
Hepper, Evelyn Charles, St. Bartholomew's Hospital.
Hertslet, Lewis Eccles, London Hospital.
Heseltine, Verner George, St. Bartholomew's Hospital.
Hingston, Clayton Alex. Francis, Middlesex Hospital.
Hollick, Bernard Septimus, Mason College, Birmingham.
Holroyd, Benjamin, Yorkshire College, Leeds.
Horsey, Frederick Samuel, St. Mary's Hospital.
Hosford, Alfred Stroud, University College, London.
Hoyle, John, Owens College, Manchester.
Hughes, Leslie Edward, St. Bartholomew's Hospital.
Humphreys, George Jacks, St. Bartholomew's Hospital.
Hutchinson, Thomas, Mason College, Birmingham.
Inness, William James Deacon, St. Mary's Hospital.
James, Herbert, Merchant Venturers School, Bristol.
James, William Warwick, Middlesex Hospital.
Jaques, Robert, University College, Liverpool.
Jellicoe, Stanley Coleman, Middlesex Hospital.
Johanson, Edward Georg, Westminster Hospital.
Johnson, William Gerold Greaves, St. Bartholomew's Hospital.
Jones, Ernest Guy, Owens College, Manchester.
Jones, John Pugh, University College of South Wales.
Jupp, Ralph Tennyson, Mason College, Birmingham.
Kelgwin, George John William, London Hospital.
Kempthorne, Hugh Dorset, Guy's Hospital.
Kirton, David Henry, Mason College, Birmingham.
Kroening, Victor Richard Fowell, King's College, London.
Leach, Herbert, Yorkshire College, Leeds.
Leah, Frederick Arthur, Owens College, Manchester.
Leonard, Napoleon, St. Bartholomew's Hospital.
Lewis, William Spencer, Owens College, Manchester.
Lipscomb, Neil, St. Bartholomew's Hospital.
Lloyd, Robert Archer, St. Bartholomew's Hospital.
McBride, Charles Gordon, St. Thomas's Hospital.
Maitland, Vivian Gray, Mason College, Birmingham.
Marsh, Charles Alfred, London Hospital.
Marrett, Henry Norman, St. Bartholomew's Hospital.

Mead, Edgar Preston, London Hospital.
Meadows, Sydney Nanvers Woolner, Middlesex Hospital.
Mence, William Charles, St. Thomas's Hospital.
Miles, Thomas George, Guy's Hospital.
Miles, William Percival, St. Bartholomew's Hospital.
Mitchell, Talbot Carter, Yorkshire College, Leeds.
Morcom, Theophilus William, London Hospital.
Moore, Leonard Augustuine, University College, Bristol.
Muter, Charles William, King's College, London.
Newport, Harry MacGregor, Charing-cross Hospital.
Nicholson, William, Owens College, Manchester.
Norton, John Chalmers, University College, Bristol.
Oades, Geoffrey Smyth, Merchant Venturers School, Bristol.
Paget, Walter Gray, St. Bartholomew's Hospital.
Palmer, Charles Ambrose, St. Thomas's Hospital.
Parker, Christian, London Hospital.
Parker, Herbert Alban, St. Thomas's Hospital.
Pascoe, James Sydney, Charing-cross Hospital.
Peake, Sydney John, King's College, London.
Perkins, Eric McLeod, London Hospital.
Perkins, Philip Meyler, St. Bartholomew's Hospital.
Pern, Lionel, Guy's Hospital.
Petty, James Bertie, Charing-cross Hospital.
Pollock, Aubrey Keatinge Halliday, St. Bartholomew's Hospital.
Porter, Charles Robertson, London Hospital.
Potter, Godfrey Russell, Yorkshire College, Leeds.
Reid, Douglas Harold, St. Thomas's Hospital.
Reilly, Percy George, London Hospital.
Renshaw, William Cooke, Owens College, Manchester.
Rice, Frank Melville Pitcairn, St. Bartholomew's Hospital.
Richards, Ralph Conrad, University College, London.
Ridge, Edwyn Manners, London Hospital.
Roberts, Thomas Howard Frederick, Guy's Hospital.
Robertson, James Fenwick, St. Bartholomew's Hospital.
Rogers, Edward Norman Tilly, Middlesex Hospital.
Saunders, Leonard Douglas, St. George's Hospital.
Sayer, Thomas, Yorkshire College, Leeds.
Serpell, Hugh Hamilton, St. Bartholomew's Hospital.
Seagrove, George Mervyn, St. Bartholomew's Hospital.
Sich, Hugh Hamilton, St. George's Hospital.
Sime, Frank Wheler, Guy's Hospital.
Skelton, Dudley Sheridan, London Hospital.
Smale, Herbert, St. Mary's Hospital.
Small, Robert, St. Thomas's Hospital.
Smith, Ernest George, St. Bartholomew's Hospital.
Smith, George Percy, Mason College, Birmingham.
Smith, Robert Howard Newby, London Hospital.
Sodhi, Makham Singh, London Hospital.
Soper, Gerald Morgan, St. Mary's Hospital.
Spitta, Harold Robert Dacre, St. George's Hospital.
Staniforth, Henry Edward, Firth College, Sheffield.
Steele, William Lawrence, University College, London.
Steen, Wilfred Alexander, London Hospital.
Swindale, Henry Vernon, Middlesex Hospital.
Symons, Angelo Nelson, London Hospital.
Tayler, Frederick Ernest, St. Bartholomew's Hospital.
Terry, Reginald Herbert, Guy's Hospital.
Thomson, Frederic William, Firth College, Sheffield.
Thorne, Richard Thorne, St. Bartholomew's Hospital.
Tilbury, Robert, Guy's Hospital.
Tovey, Arthur Hamilton, St. George's Hospital.
Tordiffe, Arthur Murray Stewart, University College, Bristol.
Turle, James Evan, University College, London.
Turner, Douglas Duke, St. Thomas's Hospital.
Tweedie, Alexander Robert, St. Bartholomew's Hospital.
Upcott Gill, Geoffrey Allen, University College, London.
Wadmore, James Christopher, University College, Bristol.
Walker, Ernest, Charing-cross Hospital.
Walker, Frederick George, St. George's Hospital.
Wallis, Vernon Montague, Guy's Hospital.
Walters, Charles Ferrier, University College, Bristol.
Walters, Joseph, University College of South Wales, Cardiff.
Webb, Louis, Guy's Hospital.
Welch, Frederick Day, London Hospital.
Wellington, Arthur Robartes, St. Mary's Hospital.
Whitaker, Roy Henry Rollinson, St. Bartholomew's Hospital.
Willett, Edward Lightfoot, Owens College, Manchester.
Willey, Frederick, Yorkshire College, Leeds.
Williams, Arthur Harold, London Hospital.
Wilson, Frederick Ernest, University College, London, and Guy's Hospital.
Wilson, Richard Eldred, London Hospital.
Winder, Maurice Guy, St. Bartholomew's Hospital.
Young, Thomas, St. Bartholomew's Hospital.
Young, William John, University College, Liverpool.

SOCIETY OF APOTHECARIES OF LONDON, APRIL, 1896.—The following candidates passed in the undermentioned subjects:—

Surgery.—H. L. Billett, E. L. Colebrook, Royal Free Hospital; F. C. B. Gittings, Middlesex Hospital; W. A. Harmer, Aberdeen; C. G. Higginson, A. Hilton, Manchester; E. C. Hort, Cambridge and Guy's Hospital; C. E. Long, Royal Free Hospital; A. V. Moreton, Manchester; A. T. Morgan, Bristol; and S. F. Smith, St. George's Hospital.

Medicine, Forensic Medicine, and Midwifery.—E. C. Bond, A. M. Browne, E. L. Colebrook, Royal Free Hospital; L. F. Forbes-Winslow, Charing-cross Hospital; F. C. B. Gittings, Middlesex Hospital; and C. E. Long, Royal Free Hospital.

Medicine and Forensic Medicine.—C. A. K. Renshaw, Cambridge and Manchester; and W. L. Roberts, St. Mary's Hospital.

Medicine and Midwifery.—T. B. Bokenham, St. Bartholomew's Hospital; and M. Orange, Royal Free Hospital.

Medicine.—A. N. Clemenger, St. George's Hospital; and T. G. King, London Hospital.

Forensic Medicine and Midwifery.—W. A. Davidson, Birmingham and London; R. N. De Beauvais, Aberdeen and St. Mary's Hospital; H. Herbert, London Hospital; and C. N. Saldanha, Madras.

Forensic Medicine.—F. C. Collinson, Leeds; F. R. M. Heggs, Birmingham; and A. W. Shea, Dublin and Sheffield.

Midwifery.—H. L. Billett, Royal Free Hospital; and C. A. A. Coulthard, St. George's Hospital.

The diploma of the Society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery:—E. C. Bond, E. L. Colebrook, F. C. Collinson, L. F. Forbes-Winslow, F. C. B. Gittings, W. A. Harmer, A. Hilton, E. C. Hort, C. E. Long, and A. T. Morgan.

LITERARY INTELLIGENCE.—Messrs. Frank Weir and Co., of New York, announce the first number of a monthly periodical, which will contain in the form of a classified subject-index the titles of all papers that have appeared during the previous month in the medical journals of the United States and Canada and in the published Transactions of the various medical societies of these countries.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on April 15th, Dr. Mutch, President, being in the chair.—Mr. Laws read a paper on Colour Vision, illustrated by pendulum apparatus and colour-top, of which an abstract will be found on p. 1125.—Dr. W. B. Ransom showed the Reaction to Iodine of several specimens of Gluten Flour from well-known manufacturers. All the specimens contained a considerable amount of starch except one of Soya flour.—Dr. Hunter showed a Stomach containing two Perforated Ulcers from the body of a young woman who had died after a short attack of acute abdominal pain. He also showed Enlarged Mesenteric Glands, presumably tuberculous, from a child two months old.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The seventh meeting of the session was held on April 8th in the Medical Library of University College, Bristol.—Dr. P. W. Williams mentioned that the Huxley Memorial Fund was now started and that he would be glad to receive subscriptions to the same.—Dr. P. W. Williams showed a patient with Cerebral Spastic Diplegia and a patient with Early Intrinsic Malignant Disease of the Larynx.—Mr. J. Swain made some remarks on the second patient.—Mr. F. W. Crossman (for Dr. Crossman) showed a specimen of Perforation of the Duodenum.—Mr. T. Carwardine read an interesting paper on Dermoid of the Neck.—Mr. Munro Smith, Mr. J. Swain, and Dr. Edgeworth commented on the paper.—Mr. Paul Bush read a paper on a case of Compression of the Brain due to Rupture of the Middle Meningeal Artery which he had treated by operation and which ended in complete recovery.—Dr. Michell Clarke remarked on the paper.—Mr. Munro Smith gave a Lantern Demonstration of Photographs by "x" Rays; and also of cases of Chancres on the Fingers, &c.—Dr. Shingleton Smith and Mr. James Taylor gave a Lantern Demonstration of some of the ordinary Human Parasites.—Dr. Michell Clarke and Mr. James Taylor gave a Lantern Demonstration of the Nerve Cells and Fibres stained by Golgi's method.

DIPHTHERIA IN LONDON.—The data for the third period of four weeks of the present year are now before us with regard to diphtheria in London. They are not very encouraging. It would appear that in the four weeks ended on March 21st the notifications of the disease in the metropolis amounted to a total of 1009, or an average of 252 weekly, and that all but two of the sanitary areas of the county of London were invaded. Camberwell had as many as 119 notified cases, and the four districts which had upwards of 50 notifications accounted for a total of 304, or 30 per cent. of the 41 invaded areas. The corresponding period of 1895 saw only 488 notifications, and the two preceding monthly periods of this current year 988 and 1054 respectively. The registered deaths in the period ended on March 21st were 191, or 48 weekly, and were at the rate of nearly 19 per cent. of the notified cases. Since the close of this period—i.e., since March 21st—the weekly deaths have been 51, 45, 45, and 42 respectively. The average has thus been 46, a slight decline on that of the preceding four weeks. Last week the admissions to hospital were 90, against 105, 82, and 78 in the preceding three weeks. The patients remaining in hospital on Saturday last numbered 671, as compared with 712 and 706 on the corresponding Saturdays of February and March. In the last three weeks the registered deaths from diphtheria in the West Ham district have been as many as 6, 8, and 10, this suburb of London remaining in an unenviable position.

MESSRS. ALLEN AND HANBURYS have installed at 48, Wigmore-street, Cavendish-square, a complete apparatus for the demonstration of the new mode of photography.

PRESENTATION TO A MEDICAL MAN.—At the Plymouth terminus of the London and South Western Railway on the occasion of presenting, on Saturday last, certificates to the successful members of the Friary Ambulance Class, Dr. Wm. A. Buchan of Plymouth was the recipient of an engraved silver cigarette case for his instructive lectures on First Aid.

NORTH-WEST LONDON CLINICAL SOCIETY.—A clinical meeting of this society was held on April 15th. Dr. Harry Campbell showed two cases of Hemiplegia, both in middle-aged women. The first case was a typical example of cerebral hæmorrhage. Consciousness had been lost and left-sided hemiplegia rapidly developed. In this case almost complete recovery had taken place. The second patient had suffered from dilated heart, and paresis followed by paralysis of the right arm ensued. The arm had remained absolutely powerless. Dr. Campbell regarded the second case as one of arterial thrombosis.—Dr. Sibley showed a case of Psoriasis in a girl. The case had done well under oil of cade locally and arsenic internally. The lesions were abundant on the scalp and trunk, but there were none upon the elbows or knees.—Mr. Jackson Clarke showed a case of Raynaud's Disease in a woman aged thirty-five. There was a sloughy ulcer on the middle finger of the left hand. Mr. Clarke also showed an elderly woman who had suffered from Osteo-arthritis for thirty-three years. Nearly all the larger joints and the temporo-maxillary articulations were affected. The elbow joints were greatly enlarged and the tense fluctuating swellings showed that not only was the capsule distended, but that there were hernial protrusions of the synovial membrane beyond the capsule.—Dr. Sibley showed an unmarried woman aged twenty-eight with a large firm tumour occupying the lower half of the abdomen. The patient had suffered no inconvenience beyond discomfort caused by the weight of the growth. Menstruation had not been disturbed. Dr. Sibley believed it to be a large solid tumour of the left ovary.

THE DIFFUSION OF SMALL-POX.—Only one death from small-pox was registered last week among the thirty-three large towns dealt with by the Registrar-General; this was at Leeds. No death has occurred in London since the two registered in the week ending March 7th. The notified cases during the four weeks ending March 21st numbered only 23, and of these 9 belonged to Islington, 5 to Hackney, and 4 to Lambeth. In the preceding four weeks the total notified cases in London had been exactly double this number. At Gloucester matters have not improved. The Sanitary Committee reported up to Thursday of last week a total of 1302 cases in the city. In the week ended on that day the fresh cases had been 201, the deaths in hospital 25, and outside the institution 20, leaving in hospital 248 patients. The discharges in the week numbered only 18. These figures are not hopeful. The epidemic has now reached parts of the city hitherto free, the courts, slums, and alleys being invaded. The Town Clerk has written a strong letter to the Press on the present attitude of the authorities local and central towards the vaccination question, pointing out that prior to any move made at Gloucester either on the part of the central board, or of the local board of guardians, the corporation had got the machinery for securing the vaccination of the city into operation. He denies the efficacy of the staff provided by the guardians, even under pressure, to cope with the heavy arrears of unvaccinated persons. The fall in the numbers of new cases in the three days which ended on Monday of last week has not been maintained. The attacks reported on Tuesday increased to 51, although this number included some cases which occurred on the Monday. It would appear that much complaint has been made as to the haphazard manner in which isolated families have been visited with the view of ascertaining whether any members had sickened in consequence of the primary invasion of the household. Some families are stated to have been left unvisited for four weeks together with only one week's pay. As a consequence of this neglect members of their households had been out mixing with the general public. Instances of gross carelessness have been reported, such as the visiting of the homes of persons where those dead of small-pox were lying and the crowding around patients by their neighbours in the foolish though natural desire of saying good-bye prior to removal to hospital. A man with the disease out upon him has been discovered in a public thoroughfare, and another patient escaped from his residence and was only captured after being some hours at large. These are but instances of the difficulties with which the sanitary officials have to contend. In addition, failures to notify cases have been met with. In the case of one family, thirty attacks have been traced to concealed occurrences in the house. Meantime, vaccination and revaccination proceed, and in the week ended April 18th the persons vaccinated by the public vaccinators numbered 3285, while the work of private practitioners probably brings the total up to nearly 4000. Upon the direct representation of the corporation the guardians have acquiesced in the proposal that they should appoint additional vaccinators for the purpose of more quickly securing the protection of the unvaccinated who are still very numerous in the city. The corporation have done a good work by carrying on a house-to-house visitation for the same purpose. The Local Government Board, at the special request of the guardians, dispatched Dr. Sweeting to Gloucester on Wednesday and thus once again showed their practical desire to aid the local bodies in their efforts to defend the town against further inroads of small-pox. Dr. Coupland, on behalf of the Royal Commission on Vaccination, has again visited the city and has proceeded further with his detailed investigation of the circumstances of the outbreak in so far as they may have interest for the Commission. A Mr. Pickering has announced his ability to treat successfully all cases of small-pox by a hydropathic method and a local chapel was actually placed at his disposal as a temporary hospital for the treatment of those severer cases which could not be treated in their homes; but the hostile attitude of the citizens, provoked rather by the aggregation of small-pox cases in a populous neighbourhood than by any inherent distrust in Mr. Pickering's folly, has interfered with the smoothness of that gentleman's proceedings. Social events continue to be postponed, and the Bishop of Gloucester has requested candidates for holy orders coming up to the postponed ordination to be revaccinated before entering the city. Funds still flow in for the nursing of poorer patients, and charity in other forms is cheerfully sent in to the authorities. The grand jury of the Easter quarter sessions of the peace at Gloucester have made a presentment strongly in favour of the necessity of vaccination at the present juncture, and have expressed their belief that the duty of administering the Vaccination Acts should be withdrawn from guardians and placed in the hands of the Local Government Board or some other independent body.

Parliamentary Intelligence.

CURRENT NOTES.

The Budget.

THE Chancellor of the Exchequer (Sir Michael Hicks-Beach) made his Budget statement on Thursday, April 16th, and in the course of it gave some interesting information as to the changes in the popular taste in the matter of drink of one kind and another. For instance, he said that whereas in the year 1875 the consumption of cocoa was 5 oz. per head of the population, double that amount was consumed last year, while in the matter of coffee against 21 oz. per head consumed forty years ago there was last year only 11 oz. per head. Tea, he said, is driving coffee out of the market "because it is cheaper, because it requires less milk and because it is easier for people to make." With regard to spirituous drink, he was able to assure the House that British and Irish spirits are entirely displacing foreign spirits, that since the year 1870 the consumption of the latter has declined 23 per cent., while the consumption of the former has increased by 5 per cent. The taste for rum, except in the most extraordinarily cold weather, would appear to be declining in England, and the explanation given was that "people prefer, as they do in wine, what I may call a lighter and cleaner spirit." The figures with regard to tea show an increased consumption during the year of no less than 10,000,000 pounds weight, and point to the trade being rapidly transferred from China to India and Ceylon. In 1875 more than 122,000,000 lb. came from China, and in 1895 only 31,500,000 lb., while as to India and Ceylon there came from these countries in 1875 23,220,000 lb., and in 1895 190,500,000 lb. With regard to tobacco, Sir Michael Hicks-Beach said there has been a great increase in the consumption of cigarettes, largely due, as he suggested, to the taste

of youths in this direction, and with regard to wines he said that the stronger kinds are decreasing, while the lighter sorts are increasing in popularity. As to the Budget proposals, it is perhaps enough to say here that they do not include any increase in taxation.

Mining Accidents.

The Government has introduced in the House of Commons a Bill to amend the Coal Mines Regulation Act of 1887 in the direction of increasing the precautions against accidents in fiery and dusty mines.

The Vaccination Commission.

Mr. Chaplin, President of the Local Government Board, has made it known that he has availed himself, and intends to continue to avail himself, of every opportunity presenting itself of informing boards of guardians that they have no legal right whatever to suspend action for the enforcement of the vaccination laws pending the issue of the report of the Royal Commission.

HOUSE OF COMMONS.

THURSDAY, APRIL 16TH.

Treatment of Inebriates.

Mr. Knowles asked the Secretary of State for the Home Department if he would introduce at an early date a Bill to carry out the report from the Departmental Committee on the treatment of inebriates.—Sir Matthew White Ridley replied: The Bill is in draft, but I am afraid I cannot say when I shall be able to introduce it. The establishment of inebriates' reformatories and the detention in them for long periods of persons habitually convicted of drunkenness are, as the hon. member is aware, an entirely new departure in our methods of dealing with crime, and the details of the measure, especially from a financial point of view, require the most careful consideration.

Poor-law Schools.

Mr. Chaplin, in reply to a question by Mr. Bemrose, said the Local Government Board were aware that considerable numbers of children had been retained of late in London workhouses for want of school accommodation and for other reasons, and that the arrangements where they were so retained were not in all cases satisfactory. Questions as regards school accommodation for Poor-law children had necessarily been much in abeyance pending the inquiry of the Poor-law Schools Committee.

Cycle Accidents in London.

Sir Matthew White Ridley, replying to several questions on this subject, said: I have obtained a return which has been prepared by the police after careful inquiry, showing the number of fatal and serious accidents which have occurred to cyclists in the police district during the first quarter of the year. The number of fatal accidents was three: of serious accidents, such as fracture of limb, concussion, internal injuries, 12; in two cases only were the persons injured women. There have been, besides, numerous cases of slight accidents in which persons have either gone to their homes or, if taken to the hospital, have not been detained there. Considering the great number of those who ride in the streets, I cannot say that these figures are high or call for any exceptional measures. At the same time, there can be no doubt there is a great deal of reckless riding; during the first quarter of the year 318 persons were summoned by the police for this and similar offences. I have no power, however, to limit cyclists to certain thoroughfares or to subject them to regulations not applicable to traffic generally; but the police do everything in their power to minimise risk. In only one case, so far as I have been able to ascertain, has a coroner recently made any remark on the subject of these accidents in the London streets.

FRIDAY, APRIL 17TH.

The Fees of Medical Witnesses.

Dr. Farquharson asked the Secretary of State for the Home Department whether his attention had been called to the serious loss of time and money incurred by medical witnesses, who were compelled to leave their practices in order to give evidence at sessions and assizes in England and Wales, for which no adequate remuneration was given them, and, if so, whether he was prepared to provide a remedy by assimilating the fees to those paid in Scotland.—Sir Matthew White Ridley replied: The question of the remuneration of medical witnesses has received the consideration both of my predecessor and myself. It forms a part only of the question of the remuneration of witnesses generally, and I should not feel justified in altering the amounts to be paid to one class of witnesses alone. I am disposed to think that the revision of the present general scale, which was fixed so long ago as 1858, will require to be undertaken sooner or later, but any such general alteration would be attended by a large increase of expenditure falling on county funds.

MONDAY, APRIL 20TH.

Pleuro-pneumonia.

Mr. White asked the President of the Board of Agriculture whether, as in the case of swine fever, he would appoint a departmental committee to review the experience gained since (say) 1890 respecting the etiology, pathology, and morbid anatomy of the diseases known as pleuro-pneumonia; to supplement that experience by a series of experiments as to the bacteriology and life history of these diseases, and as to their communication, either directly or indirectly, from animal to animal; and to bring together the results of the work of foreign investigators.—Mr. Walter Long replied: Our scientific knowledge respecting pleuro-pneumonia is much more extensive than in the case of swine fever, and I have no reason to believe that it would be materially increased by the appointment of a departmental committee, whose opportunities for investigation would be very small by reason of the fact that cases of the disease in this country are happily now so rare. In these circumstances I do not see my way to adopt the suggestion of the hon. member.

The Disinfecting of Clothing.

Mr. Young asked the Chief Secretary to the Lord-Lieutenant of Ireland whether he was aware that the rule which compelled all sick persons, whether pay patients or not, entering the infirmary of a workhouse to wear union clothes prevented large numbers from availing themselves of those hospitals, thereby causing much suffering and the spread of infectious diseases, especially in rural districts; and whether he would take steps to rescind this rule and leave it discretionary with the medical officers to permit patients to use their own clothes when considered by them sanitary.—Mr. Gerald Balfour replied that the rule referred to, which also applied in England and Scotland, required that the clothing of patients suffering from infectious and other diseases should be taken from them on admission to the workhouse infirmary and cleansed and disinfected. He was not aware that the operation of this rule had the effect ascribed to it in the question, and the Local Government Board were of opinion that it could not be rescinded without endangering the health of the inmates of the institution; nor was it deemed advisable to vest in the medical officer the discretionary power suggested.

TUESDAY, APRIL 21ST.

The Tuberculosis Commission.

Mr. Cawley asked the President of the Local Government Board whether, in view of the fact brought to light by the Royal Commission on Tuberculosis that so many cows suffering from tuberculosis were giving milk which was supplied to consumers, and that the milk from these cows was dangerous to the health of human beings, he was prepared to institute some system by which all cows whose milk was sold for public consumption should be placed under compulsory inspection.—Mr. Chaplin said in reply: While the report of the Commission of 1895 has dealt fully with the scientific aspects of the matter referred to in the question, no report has been made upon administrative procedures necessary to give effect to the conclusions of the Commission. The Government have therefore assented to the proposal that a Royal Commission should be appointed to consider and report upon these matters. Legislation would be necessary to enable me to order the compulsory inspection of all cows whose milk is sold for public consumption, and I think it should be postponed pending the inquiry which has been determined on. In the meantime I may remind the hon. member that it is to be gathered from the report that by a very simple process—viz., by boiling the milk—immunity can be insured to the consumer.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BEATTY, J., M.B., B.S.Dubl., has been appointed House Surgeon to Dr. Steevens' Hospital, Dublin.

CALEY, JAS. W., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Riccall Sanitary District of the Selby Union.

CARSON, H. W., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the Evangelical Protestant Deaconesses' Institution and Training Hospital, the Green, Tottenham.

DANIELL, G. H. S., M.B., B.C.Camb., has been appointed Medical Officer for the First Sanitary District of the Blandford Union.

DUNCAN, R. B., M.D. Durh., B.S., has been reappointed Medical Officer for the Bradninch Sanitary District of the Tiverton Union.

EVANS, J. J., M.B., M.S. Edin., has been appointed Senior House Surgeon to the Birmingham and Midland Eye Hospital, Birmingham.

FINDLAY, W., M.B., C.M. Aberd., has been appointed Medical Attendant to the employees of the cleansing and lighting department by the City of Aberdeen Council.

GARNER, J. E., M.D. Aberd., has been reappointed Medical Officer for the First Sanitary District of the Preston Union, Lancashire.

GALLOWAY, W., L.R.C.P., L.R.C.S Edin., has been appointed Medical Officer for the South Gateshead Sanitary District of the Gateshead Union.

GRAHAM, J., M.B., C.M. Edin., has been appointed Medical Officer for the Orton Sanitary District of the East Ward Union.

HISLOP, JAS. A., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the district of Glenely.

KILLEN, S., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Superintendent of Shiels Institute, Carrickfergus.

LAMPLOUGH, CHAS., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician, City of London Hospital for Diseases of the Chest, Victoria Park.

LIMRICK, W. S., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health for Waterloo.

LONG, F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Wells Sanitary District of the Walsingham Union, vice A. Whitlock.

MACON, ARTHUR V., M.B., M.Ch. Dubl., F.R.C.P. Irel., has been reappointed King's Professor of Midwifery in the Royal College of Physicians of Ireland.

MINNES, R. S., M.D., M.R.C.S., has been appointed Resident Surgical Officer to the Birmingham and Midland Eye Hospital, Birmingham.

MOORE, E. D., M.B., M.S. Edin., has been appointed Junior House Surgeon to the Birmingham and Midland Eye Hospital, Birmingham.

MORTON, BRUCE B., M.B., C.M. Glasg., has been appointed Resident Dispensary Surgeon to the Bradford Infirmary.

MUNRO, HECTOR, M.B., C.M. Aberd., has been appointed Resident Dispensary Surgeon to the Bradford Infirmary.

PAGE, GEORGE SHAFLEY, L.R.C.P., L.R.C.S. Edin., has been appointed Public Vaccinator for Bristol, vice Henry Lawrence, deceased.

PAXTON, F. V., M.B. Oxon., M.R.C.P. Lond., has been appointed Consulting Physician to the Chichester Infirmary.

PENNY, F. S., M.R.C.S. Eng., L.R.C.P. Lond., of King's College Hospital, London, has been appointed House Surgeon, vice E. Baines, resigned.

ROBERTS, J. LLOYD, M.D., B.S., B.A., B.Sc. Lond., F.R.C.S. Eng., has been appointed Honorary Assistant Physician to the Stanley Hospital, Liverpool.

SADLER, F., M.B., B.Ch. Oxon, has been appointed Honorary Surgeon to the Beckett Hospital and Dispensary, Barnsley.

SMITH, A. G. L., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer to the Crick District of the Rugby Union, vice Wallace resigned.

SIMMONS, G. A., M.D. Lond., B.S., M.R.C.S., L.R.C.P., has been appointed Medical Officer for the Fairfield House Workhouse, parish of Chelsea, vice A. W. Read, resigned.

THOMSON, A., M.B., C.M. Edin., D.P.H. Camb., has been appointed Medical Officer of Health for the Marston Sicca Rural Sanitary District.

THORNE, B. B. THORNE, M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Physician to St. Peter's Convalescent Home, Woking.

WALLIS, E. D., M.R.C.S., has been appointed Medical Officer by the Leiston Urban District Council.

WIGETMAN, C. FRANK, F.R.C.S. Eng., has been appointed Senior House Surgeon to the Bolton Infirmary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ADELAIDE HOSPITAL, GOVERNMENT OF SOUTH AUSTRALIA.—Senior Resident Surgeon—Senior Resident Physician—Salary for the Surgeon £300, with apartments and board, and salary for the Physician £300, with apartments and board.—Applications to Mr. T. Playford, Agent General, 1, Crosby-Square, Bishopsgate-street Within, London, E.C.

BOROUGH OF PORTSMOUTH.—Medical Officer of Health, Port Sanitary Medical Officer and Medical Officer to the Infectious Diseases Hospital for the Borough. One appointment. Salary £450 per annum, rising to £550 per annum as a maximum by four annual instalments. Applications to the Town Clerk.

BURGH OF LEITH PUBLIC HEALTH HOSPITAL.—Resident Physician for one year. Salary £50 guineas. Applications to the Town Clerk, Town Clerk's Office, Leith.

CORPORATION OF CROYDON, BOROUGH HOSPITAL FOR INFECTIOUS DISEASES.—Resident Medical Officer for three months. Salary £10 10s. a month, with board and lodging. Applications to Dr. Wilde, Sanitary Department, Katherine-street, Croydon.

CREDITON UNION.—Medical Officer for the sub-district of Bow. Salary £36 15s. per annum, with the usual fees for midwifery and surgical cases. Application to the Clerk, 2, Market-street, Crediton.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—House Physician, for six months, unmarried. Salary £20, with board and residence in the hospital.

HOSPITAL FOR SICK CHILDREN, Newcastle-on-Tyne.—Resident Medical Officer. Salary £60, with board, lodging, and laundry.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle-street.—House Surgeon. Salary £85 per annum, with board and lodging.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £70 per annum, with board and residence in the institution.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Surgeon and Assistant Surgeon.

NORTHUMBERLAND, DURHAM, AND NEWCASTLE INFIRMARY FOR DISEASES OF THE EYE.—Honorary Surgeon. Applications to the Secretary, St. Mary's-place, Newcastle-on-Tyne.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and Assistant Resident Medical Officer. Each appointment for six months. Salary for senior post at the rate of £50 per annum.

PLYMOUTH ROYAL EYE INFIRMARY.—Honorary Surgeon.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant House Surgeon for six months. Gratuity of £10 will be given if found satisfactory.

SHEFFIELD ROYAL HOSPITAL.—House Physician, unmarried, for one year. Board (exclusive of wine and beer) and lodging provided, and an honorarium of 25 guineas.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon for six months. Board and residence provided, and an honorarium of £10.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon for six months. Board and residence provided, and an honorarium of £10 given after six months' satisfactory service.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, Cavendish-square.—Assistant resident Medical Officer for six months. Salary at the rate of £50 per annum, with furnished apartments, attendance, coal, and light.

ST. THOMAS'S HOSPITAL, London.—Assistant Obstetric Physician.—Applications to Mr. E. M. Hardy, Treasurer's Clerk, Counting-house, Westminster Bridge.

THE DENTAL HOSPITAL OF LONDON, Leicester-square.—Anæsthetist and Assistant Anæsthetist.

THE HOSPITAL FOR WOMEN, Soho-Square, London, W.—House Surgeon for six months. Salary £30 for that period.

UNIVERSITY OF ST. ANDREWS.—Lecturers: (1) on Anatomy, salary £300 per annum; (2) on Materia Medica, salary £200 per annum; and (3) on History, salary £200 per annum. The appointments for a term of three years. Application to the Secretary of the University Court, St. Andrews.

Births, Marriages, and Deaths.

BIRTHS.

BEALE.—On April 19th, at Clapham-road, S.W., the wife of Arthur A. Beale, M.B. Glasg., of a daughter.

CLEASBY-TAYLOR.—On April 4th, at Alcaravaneras, Las Palmas, Grand Canary, the wife of — Cleasby-Taylor, M.D. Edin., of a son.

DONALDSON.—On April 15th, at Brent-road, Woolwich, the wife of Surgeon-Captain J. Donaldson, Army Medical Staff, of a son.

LOWNDS.—On April 15th, at Hall-gate, Doncaster, the wife of Henry A. Lownds, L.R.C.P. Edin., of a son.

PURCHAS.—On April 15th, at The Bank, Newtown, North Wales, the wife of F. Utten Purchas, M.D. Edin., of a daughter.

WHITAKER.—On April 21st, at Willoughby-road, Hornsey, N., the wife of George Herbert Whitaker, M.R.C.S., of a daughter.

WILLANS.—On April 14th, at Much Hadham, Herts, the wife of W. Blundell Willans, L.R.C.P. Edin., M.R.C.S., of a son.

MARRIAGES.

BRISTOWE—KARSLAKE.—On April 15th, at St. Peter's, Cranley-gardens, Hubert Carpenter Bristowe, M.D., of Wrington, Somerset, to Mary, daughter of Lewis Karslake, of Harcourt-terrace, Kensington.

BRYANT—LEWIS.—At St. Joseph's, Seacombe, April 14th, by the Rev. Canon Singleton, William Arthur Bryant, M.B., of Hull, to Catherine Smith (Tittiens) Lewis, of Seacombe, Cheshire.

GREENYER—LINDSAY.—On April 15th, at Holy Trinity Church, Upper Tooting, Vivian Tudor Greenyer, M.R.C.S. Eng., L.R.C.P. Lond., eldest son of George Greenyer, of Hove, Brighton, to Mary J. Douglas Lindsay, younger daughter of George Lindsay, of Balham, Surrey.

GROVES—ANDERSON.—On April 21st, at the church of St. Nicholas Cole Abbey, Ernest W. Hey Groves, M.R.C.S., L.R.C.P., to Frederica Margaret Louise Anderson, second daughter of the Rev. E. Anderson.

GUTHRIE—GODDARD.—On April 16th, at Illogan Parish Church, Cornwall, Roger Christian Lingard Guthrie, M.B., C.M. Edin., of Carnoustie, Forfarshire, to Ethel Annie Kennedy, second daughter of Henry Robertson Goddard, of Fairfield, Illogan, Cornwall.

KENDALL—CROSSE.—On April 15th, at Terrington, George William Kendall, B.A., M.B. Dubl., of Queensberry, Yorks, to Phillis, youngest daughter of the Rev. Marlborough Crosse, Vicar of Terrington St. Clement's, Norfolk.

STOKES—EASBY.—On April 8th at St. Mark's, Peterborough, by the Rev. B. de M. Egerton, M.A., assisted by the Revs. R. S. Pocock and H. Whittaker, W. Calcott Stokes, Esq., of Edge Hill House, Banbury, to Mary Elizabeth, eldest daughter of William Easby, M.D., of Westgate, Peterborough.

TATE—DALZELL.—On April 21st, at St. Benets and All Saints', by the Rev. A. C. Roberts, assisted by the Rev. H. Clark, brothers-in-law of the bride, Walter William Hunt Tate, M.D., son of the late George Tate, to Flora, widow of the late Dr. Anthony Dalzell.

TURNEY—FERGUSON.—On April 22nd, at St. James Episcopal Church, Inverleith Row, Edinburgh, by the Rev. William Jenkins, Horace George Turney, M.B., M.R.C.P., of 28, Wimpole-street, London, to Margaret, daughter of the late William Ferguson, Writer to the Signet, Edinburgh.

VENABLES-WILLIAMS—PARRY.—On April 15th, at St. John's Church, Chester, by the Rev. W. Venables-Williams, M.A., Oxon., Vicar of Llandrillo, Colwyn Bay, father of the bridegroom, assisted by the Rev. L. Garnett, M.A. Oxon., Rector of Christleton, and Rev. F. A. Screeton (Durham), Curate of St. John's, William Montagu Venables-Williams, J.P., county of Denbigh, L.R.C.P. and L.R.C.S. Edin., Colwyn Bay, to Sara A. A. Parry, second daughter of Albert Parry, Vicar's Cross, Chester.

WILLIAMS—LEIGH.—On April 14th, at St. Paul's Church, Portwood, Stockport, John R. Williams, M.B. Edin., of Penmaenmawr, to Annie Mary, elder daughter of the late James Leigh, of Manor House, Brinnington, Stockport.

DEATHS.

CRAIG.—On April 15th, at Waverley House, Worthing, John Craig, F.R.C.S., late of the East India Company's service.

GASON.—On April 12th, at Rome, John Gason, F.R.C.P., L.R.C.S. Irel., aged 79 years.

HENDERSON.—On April 19th (suddenly), at his residence, Stanhope-terrace, Regent's Park, Wm. Henderson, M.D. Glasg., aged 51.

HOLTTUM.—On April 21st, at Latchmere House, Watling-street, Canterbury, Charles Holttum, F.R.C.S., in his 79th year.

METCALFE.—On April 18th, at Massongex, Valais, Switzerland, John William Metcalfe, M.D. Erlang, M.R.C.S. Eng., in his 78th year.

PARROTT.—On December 27th, 1895, at Lao-ho-k'ou, via Hankow, China, Annie W. Parrott, wife of Albert George Parrott, M.R.C.S., L.R.C.P. Lond., aged 40.

TOWNSEND.—On Sunday morning, April 19th, 1896, at 68, Queen's gate, London, Mary Alice, wife of Thomas Sutton Townsend, of Clifton Manor, Warwickshire, and only daughter of the late Thomas Ainsworth, of The Flash, Cumberland, aged 45.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 23rd, 1896.

Date.	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo.	Maximum Temp. Shade	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Apr'l 17	30·11	W.	49	46	102	61	42	0·06	Fine
,, 18	30·33	S.W.	51	48	92	60	46	...	Fine
,, 19	30·42	S.W.	51	49	96	67	45	...	Fine
,, 20	30·41	N.E.	54	50	83	57	50	...	Fine
,, 21	30·50	S.E.	47	45	95	59	42	...	Cloudy
,, 22	30·33	S.W.	49	44	91	67	41	...	Hazy
,, 23	30·17	N.E.	51	43	69	53	46	...	Overcast

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second half-yearly volume for 1895 was given in the issue of Dec. 28th. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1895 are now ready. Bound in cloth, gilt lettered, price 18*s*.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s*.; by post, 2*s*. 3*d*.

To be obtained on application to the Manager, accompanied by remittance.

THE ENDORSEMENT OF A QUACK.

To the Editors of THE LANCET.

SIRS,—A. called me in to see his wife, who was suffering from secondary nodules in the skin around a scar left by the removal of the left breast and marked dyspnœa due to collapse of the left lung, probably due to a growth near its root. As I could not promise to cure the patient and gave a bad prognosis A. suggested I should watch her whilst a quack remedy was tried. I refused to be a party to this, as I considered I should be practically covering the quack and not doing the best for my patient, and threw up the case. Will you give me your opinion what is the proper course to pursue under like circumstances?

I am, Sirs, yours faithfully,

April 13th, 1896. F.R.C.S.

*** Our correspondent took the only possible course open to him. He could not, in however distant a manner, be a party to the employment of a quack remedy for the cure of malignant disease.—ED. L.

A CASE OF SOMNAMBULISM.

ON awaking one morning recently a Dutch farmer of Heerenneen (Drenthe) perceived with astonishment that his wife was no longer in bed beside him. In one corner of the room lay her shoes and in another her clothing, but of the good dame herself not a trace could he find anywhere about the premises. Greatly alarmed he called in the aid of the police, and all day long there was a most energetic search for the missing housewife, but without avail. At length, towards evening, a peasant came forward and said that shortly after daybreak he had seen a woman in her night clothes wandering about near the village of Bonenknype. At the time he was inclined to think it was an apparition, for in the uncertain light the figure had a most unearthly look, but perhaps, after all, he was mistaken. Upon hearing this tale the farmer at once started off in the direction indicated, and finally succeeded in finding his wife at the house of her sister, which is distant three leagues from Heerenneen. The wanderer had arrived there at about seven o'clock in a dazed condition and half dead with cold. She had no recollection of leaving her home and could give no account whatever of the journey she had undertaken in such extremely light marching order. Before reaching her sister's place she had to cross a score or more of narrow bridges, some of them mere planks, and was likewise obliged to jump several formidable ditches. The fact that under these circumstances she escaped an accident is looked upon by the simple peasantry as well-nigh miraculous, but seems to bear out the general supposition that people in a state of somnambulism are able to perform gymnastic feats which they could not attempt in their waking moments.

A NOVEL METHOD OF INTRODUCING A NEWLY-QUALIFIED MAN.

To the Editors of THE LANCET.

SIRS,—As one who holds the honour of the medical profession dear, who considers it should be looked on as a "learned profession" and not as an advertising business, and that there are other considerations which are of greater importance to him who has the privilege of being a member of the same than that of making money,—as one holding these views may I beg your opinion on the following, which was publicly "cried" on the evening of April 18th, 1896, in the village of ——, ——shire: "Dr. J—— has passed his degrees of the highest order in the shortest time." There was later an intimation given that he was coming to reside there on Thursday next. Surely Dr. J—— cannot be aware of this liberty taken with his name, and should take the earliest opportunity of repudiating any responsibility for such an advertisement of one barely on the threshold of the profession.

I am, Sirs, yours truly,

April 20th, 1896. VINDICATOR.

*** Our correspondent adds that Dr. J——'s advent had been previously advertised for three months on boards. There can be no doubt that the methods adopted by Dr. J——'s friends to introduce him to the notice of his future *clientèle* are utterly opposed to all the traditions of our profession.—ED. L.

SEATS FOR THE USE OF EMPLOYÉES.

THE *Boston Medical and Surgical Journal* states that the New Hampshire Legislature has passed a law compelling all employers of females in any manufacturing, mechanical, or mercantile establishment in the State to provide suitable seats for the use of females so employed. A fine of not less than $10 (£2) or more than $30 (£6) for each offence is the penalty prescribed for a violation of the law.

"A CARDIAC CURIOSITY."

To the Editors of THE LANCET.

SIRS,—A case somewhat similar to the one described by Dr. Fuller and Mr. Gibbs under the above heading in THE LANCET of April 4th recently came under my notice. The patient was a police constable, aged thirty years, enjoying good general health and on active duty. He had a loud mitral murmur distinctly audible through his clothes at a distance of several feet. He informed me that he had had two attacks of rheumatic fever, the last three years ago, and ever since then the murmur had been present. He showed no other symptoms except slight palpitation and occasionally slight œdema of the feet and ankles. In the course of his duty he had to walk from eight to twelve miles per day in a very hilly district.

I am, Sirs, yours faithfully,

JOHN CRAIG, L.R.C.P. & S. Edin., L.F.P. & S.G.

Wolsingham, Darlington, April 9th, 1896.

A TRANSLATION AT FAULT.

AN amusing blunder appeared in a French journal published, curiously enough, on April 1st. An account being given, translated from the *Vrach*, of the cure of two cases of diphtheria by the injection of *petit lait anti-diphtérique*. Anti-diphtheritic whey! It happens, however, that the Russian word "suivorotka" means serum as well as whey.

Doubtful.—The questions are very proper ones in the light of a possible marriage and should be referred to the medical attendant of the family. They do not all admit of a definite answer.

FILARIA SANGUINIS HOMINIS IN PHILADELPHIA.

ACCORDING to the *Philadelphia Polyclinic* living filariæ in the blood were for the first time demonstrated in Philadelphia last February, when **Dr. F. P. Henry** exhibited a number of microscope slides showing the embryos alive and active. The blood was drawn from the finger of a white woman, who was a patient in the Women's Hospital, and had developed hæmato-chyluria after labour. She was a native of South Carolina and had been in Philadelphia not quite one year. It was probable that the parasite had been acquired in the South and that rupture of a lymph vessel during the strain of labour had led to the chyluria; it was an example of the nocturnal variety, and was consequently not to be found in the blood drawn from the surface vessels during the day.

GOOD *v.* BAD VACCINATION.

To the Editors of THE LANCET.

SIRS,—I in large measure fully sympathise with "A London Doctor" who in a recent letter to the *Pall Mall Gazette* has deplored the sort of vaccination which, equally with the best, is declared to be "successful." He advocates the certification of the vaccination of an individual only after the operator has made four insertions, together with rigid examination of the person vaccinated by an expert giving up his time to this duty. Without going so far as this I would gladly see the instructions of the Local Government Board which bind public vaccinators made equally binding on all practitioners, and enforced if need be by Government examination, as is now done in the case of public vaccinators. The Government, while inspecting the results of vaccinations performed by officials over whom it has some control, is allowing other men a free hand. As a consequence certain members of the medical profession may, if they choose to look askance at vaccination as a prophylactic, comply with the letter of the law and infringe its spirit at will. I would, indeed, go a step further. We consider that it is desirable that a medical officer of health should be debarred from coming into competition in the way of ordinary practice with his professional brethren—at least that view is growing in the profession. Similarly I would see all vaccination relegated to properly appointed public vaccinators. The matter is of national importance. Then let it be done under central supervision and only by those who come under that supervision.—I am, Sirs, yours faithfully,

April 22nd, 1896. ONE WHO KNOWS.

Reproduction has not put his questions in very definite shape. The structure and physiology of the parts will be found fully given and freely illustrated in all standard works on anatomy. For the best authorities on the different pathological points we refer our correspondent to "Neale's Digest" (1840–1890), p. 498, *et seq.*

"A SKIN AFFECTION PRODUCED BY WORKING IN TEAK."

To the Editors of THE LANCET.

SIRS,—A gentleman was in my consulting room this forenoon who has had thirty years' experience of working in teak. I read the question on teak appearing in THE LANCET of April 21st to him and asked him if he could answer it. He said that he had never heard of any skin affection on the face or hands troubling carpenters when working with teak, but if the smallest splint pierces the skin, or if the skin gets abraded in the slightest degree when a carpenter is working with teak, the place is sure to inflame and suppurate. I am, Sirs, yours truly,

April 20th, 1896. M.B.

Inquirer is advised not to accept the lower scale, or at any rate only to do so after statement of his intentions to the present medical officer. We appreciate the fact that the difference in distance might account for a difference in remuneration, but to take a lower sum would have the appearance of underselling a fellow practitioner, and it is very important that just now even the appearance of such a proceeding should, in the best interests of the profession, be avoided.

AN UNFORTUNATE ERROR.

WE have received the following from the Rebman Publishing Company, Limited:—

"The Rebman Publishing Company beg to state with extreme regret that they have by mistake published a testimonial purporting to be from Dr. H. Davy of Exeter with reference to their calf lymph. The testimonial was given by Dr. H. Davy of Kimmage Lodge, Terenure, county Dublin. They have never received any testimonial from Dr. Davy of Exeter nor has he in any way communicated with them on the subject.

"Dated, April, 1896."

The company have done very right to make the *amende honorable* thus definitely to Dr. Davy of Exeter, whose annoyance at finding attributed to himself a testimonial that he did not give can be imagined. The incorrect address was given in pure error as we have had an opportunity of ascertaining.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

TUESDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (29th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (30th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Great Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.).

SATURDAY (2nd).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (27th).—SOCIETY OF ARTS.—8 P.M. Mr. J. Swinburne: Applied Electro-Chemistry. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Marmaduke Sheild: On Suppurative Affections of the Mammary Gland.—Mr. J. D. Malcolm: Twenty Cases in which Abdominal Section has been Performed a Second Time.

TUESDAY (28th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—Mr. R. Barwell: On Spontaneous Dislocation of the Hip, with some Remarks on a Class of Case often mistaken for Rheumatism.—Mr. Mayo Robson: A Method of obtaining a Complete Skin Covering after Ablation of the Breast.—Mr. H. T. Butlin and Mr. Beadon Adams: On the Transplantation of Skin Flaps for the filling up of considerable Defects after Amputation of the Breast.

WEDNESDAY (29th).—SOCIETY OF ARTS.—8 P.M. Mr. E. W. Badger: Fruit Drying or Evaporation.

FRIDAY (1st).—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—7.45 P.M. Messrs. Maw, Son and Thompson will exhibit Surgical Instruments.—Messrs. Johnson and Johnson will show Surgical Dressings, &c. 8.15 P.M. The President (Mr. E. Clarke): Recent Progress in the Treatment of Diseases of the Eye.—Mr. T. Moore: Demonstration of the Roentgen Rays.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY (28th).—ROYAL INSTITUTION.—3 P.M. Professor James Sully: Child-Study and Education.

THURSDAY (30th).—ROYAL INSTITUTION.—3 P.M. Professor Dewar: Recent Chemical Progress.

FRIDAY (1st).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Dr. Dundas Grant: The Diagnosis and Treatment of various forms of Nerve-deafness.

ROYAL INSTITUTION.—5 P.M. Annual Meeting. 9 P.M. Col. H. Watkin: Chronographs and their Application to Gun Ballistics.

SATURDAY (2nd).—ROYAL INSTITUTION.—3 P.M. Professor W. B. Richmond: The Vault of the Sixtine Chapel.

During the week marked copies of the following newspapers have been received:—*Sheffield Telegraph, Manchester Guardian, East Anglian Daily Times, Folkestone Express, Leicester Post, Dundee Courier, Bedford Standard, Carlisle Journal, Northern Whig, Blackpool Gazette, Scottish Border Record, Worcestershire Chronicle, Bucks Herald, Bingley Chronicle, Times of India, Hastings Times, Pioneer Mail, Oldham Standard, Liverpool Courier, Architect, Liverpool Daily Post, Sussex Daily News, Keene's Bath Journal, City Press, Bristol Mercury, Western Daily Mercury, Sandbach Advertiser, South Wales Daily News, Western Mail, Hampshire Independent, Wakefield Herald, Bristol Times, Leighton Independent, Yorkshire Post, Builder, Westmeath Examiner, Ramsay Courier, Bradford Mercury, Newcastle Journal, Kentish Express, Leeds Mercury, Birmingham Gazette, Rochdale Observer, Scoteman, Citizen, Sanitary Record, West Middlesex Standard, Mining Journal, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Reading Mercury, Hertfordshire Mercury, Nottingham Daily Guardian, Bournemouth Visitor's Directory, Indian Mirror, Health, Practitioner, Surrey Advertiser, Local Government Journal, Gloucestershire Chronicle, Beverley Echo, Spalding Free Press, Galloway Gazette, Jersey Times, Le Temps (Paris), Edinburgh Evening News, &c., &c.*

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